WASTEWATER COLLECTION SYSTEM
FOR THE
LONGS COMMUNITY
HORRY COUNTY, SOUTH CAROLINA

PREPARED FOR:
GRAND STRAND WATER & SEWER AUTHORITY

E.T.S. PROJECT NO. 198647

E.P.A. PROJECT NO. C450-381-32

ENGINEERING & TECHNICAL SERVICES, INC.
MURRELLS INLET,
SOUTH CAROLINA
803-651-4808
DATE: JULY 1987 (REVISED DEC. 1987)

McDOWELL ENGINEERING
MURRELLS INLET,
SOUTH CAROLINA
803-651-5108

25-07-057/1-s

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LEGEND

- POWER POLE
- CATCH BASIN
- WATER METER
- FIRE HYDRANT
- CABLE PEDESTAL
- TELEPHONE PEDESTAL
- COLLECTION STATION
- EP — EDGE OF PAVEMENT
- CLEANOUT / C. O.
- 1977 — POST 1977
- RESIDENTIAL PUMP
- INTERSECTION POINT - 6" WASTEWATER LINE

---- NOTES ----

1 - CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION. INFORMATION ON EXISTING UTILITIES SHOWN ON THE DRAWINGS IS FOR INFORMATIONAL PURPOSES ONLY, NO RESPONSIBILITY IS ASSUMED BY THE OWNER OR THE ENGINEER FOR THE ACCURACY OR COMPLETENESS OF THIS INFORMATION.

(4) 2 - ALL TANK ELEVATIONS SHOWN ARE GROUND LEVEL ELEVATIONS.

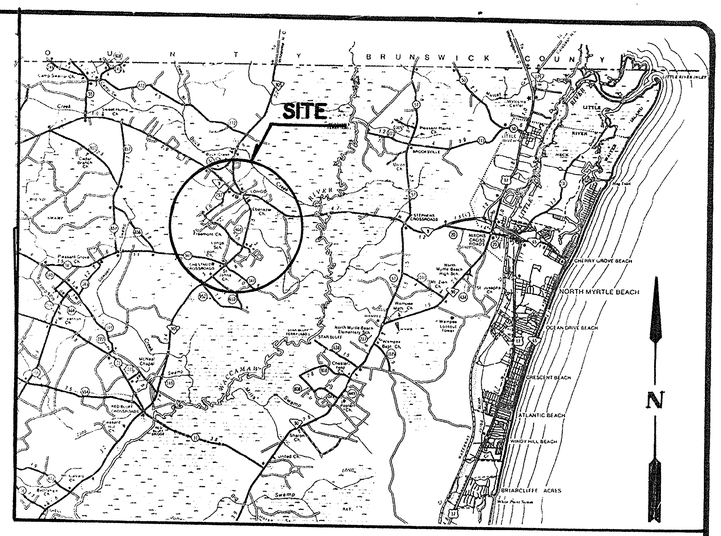
3 - ALL HOMES NOT LABELED 1977 ARE PRE -1977 HOMES. POST 1977 HOMES ARE NOT ELIGIBLE FOR E.P.A. GRANT FUNDING.

4 - ALL STORM DRAINAGE SHOWN IS EXISTING AND SHALL BE REPAIRED OR REPLACED AT CONTRACTORS DISCRETION.

5 - CLEANOUTS ARE SHOWN AT IN LINE CONNECTION POINT. ACTUAL ACCESS TO BE BETWEEN EDGE OF PAVEMENT AND R/W OR THE LEAST IMPACTED LOCATION.

6 - CONTRACT II FOR THE LONGS COMMUNITY CONSISTS OF TWO (2) SETS OF PLANS. ONE IS THIS SET ENTITLED "WASTEWATER COLLECTION SYSTEM FOR THE LONGS COMMUNITY" AND THE SECOND SET IS ENTITLED " WATER SYSTEM EXTENSION FOR THE LONGS COMMUNITY". IF THE CONTRACTOR DOES NOT HAVE BOTH SETS OF PLANS THE HE IS INSTRUCTED TO CONTACT THE ENGINEER TO OBTAIN THEM.

7 - PUMP STATION #2 AND THE 6" FORCE MAIN FROM PUMP STATION #2 TO THE LONGS WASTEWATER TREATMENT PLANT ARE PRIORITY ITEMS. THE CONTRACTOR WILL BE REQUIRED TO MAKE PROVISIONS TO COMPLETE THESE ITEMS JUNE 1, 1988.



LOCATION MAP
SCALE: 1" = 2 mi.

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 4541 JOHN C. HAWKINS

REV	DESCRIPTION	DR	APP'D	DATE
(4)	REV. INDEX AND NOTE NO. 2	BH		12-11-87
(3)	Revised Index & Notes	SRT		11-17-87
2	B-16 TO B-17	BH		8/6/87
1	ADD DATE; ADD PUMP STATION DETAILS ADD NOTE NO. 7	BH		7/17/87

SURVEYED AND MAPPED BY SUR-TECH, INC. MURRELLS INLET SOUTH CAROLINA

ENGINEERING BY E.T.S., INC. MURRELLS INLET SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN DATE
CHECKED DATE
APPROVED AUG. 1986 DATE
OWNERS APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P WENDEL
PROJECT MANAGER FRED R RICHARDSON

PREPARED BY CONTINENTAL AERIAL SURVEYS, INC BARTOW, FLORIDA

PROJECT: LONGS
TITLE: INDEX
25-07-057/2

GRAND STRAND WATER & SEWER AUTHORITY

SCALE: NO SCALE
PROJECT NUMBER
SHEET NUMBER: 1
REV

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LOCATION MAP

LONGS

REV	DESCRIPTION	DR	APP'D	DATE
3	LOCATE RESIDENTIAL PUMP STATION	RH		12-11-87
2	SHOW SHEET B-17	RH		8/6/87
1	SHOW NEW LOCATION OF P.S.	RH		4/1/87

0 1000' SCALE 1000'

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SOUTH CAROLINA

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MURRELLS INLET
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EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FREDER RICHARDSON

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CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT: LONGS

TITLE: LOCATION MAP

GRAND STRAND WATER & SEWER AUTHORITY

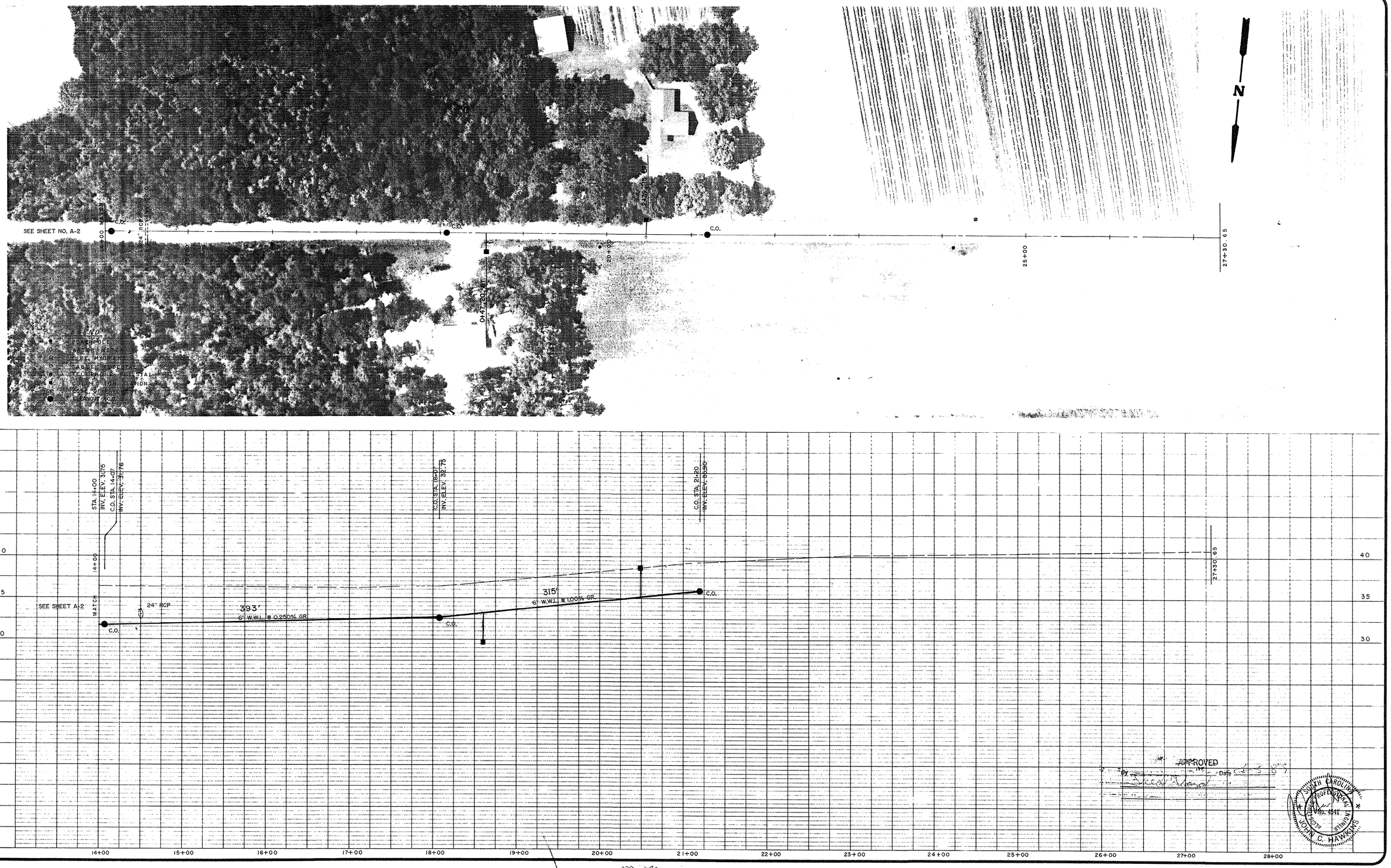
PROJECT NUMBER

SHEET NUMBER 2

REV

25-07-057/3-S

AF 37307R



APPROVED
By _____ Date 3-3-87

SOUTH CAROLINA PROFESSIONAL ENGINEER
REG. NO. 4541
JOHN C. HAWKINS

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0 50
SCALE: 1" = 50'

REV.	DESCRIPTION	DR.	APP'D.	DATE

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SOUTH CAROLINA

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SOUTH CAROLINA

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APPROVED AUG. 1986 DATE
OWNER'S APPROVAL DATE

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EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS
"AS-BUILT"

TITLE
PLAN - PROFILE
SHEET NO. A-1

GRAND STRAND WATER & SEWER AUTHORITY

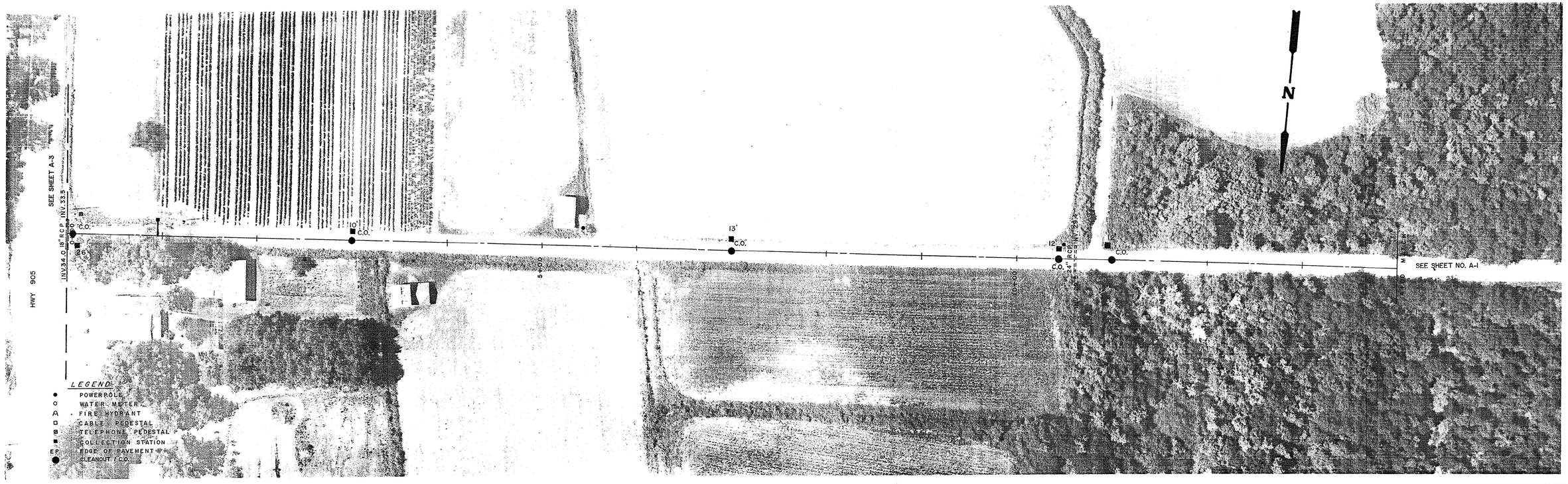
SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

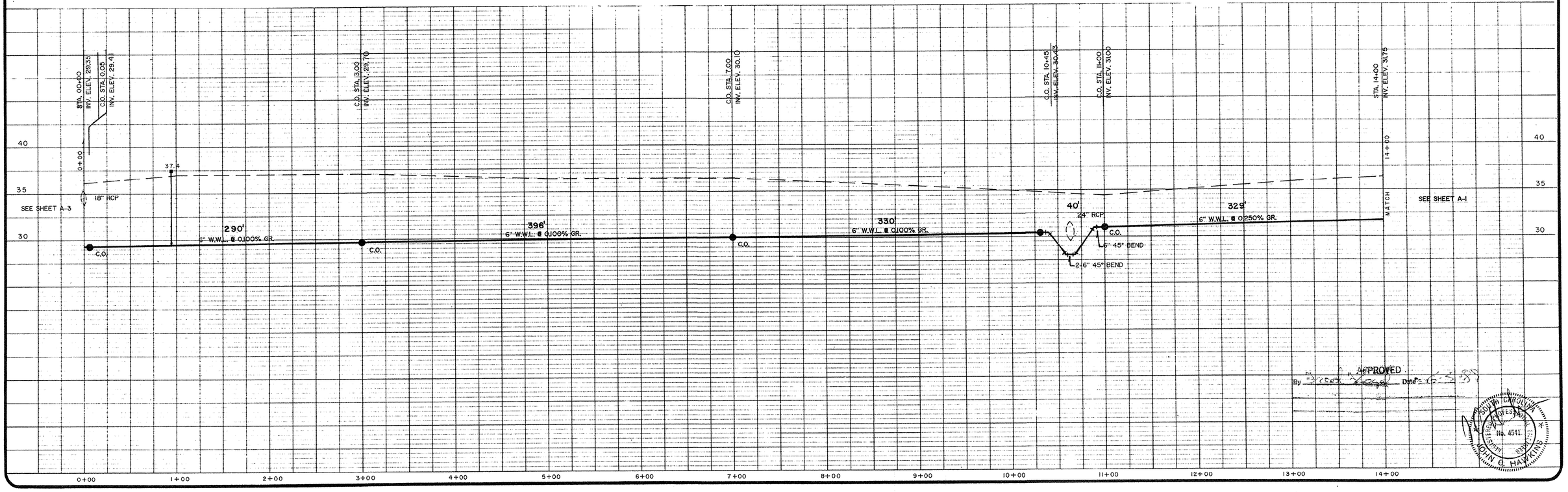
PROJECT NUMBER

SHEET NUMBER A-1 REV. -

25-07-057/4-S

AE 37307B





APPROVED
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REGISTERED PROFESSIONAL ENGINEER
No. 4541
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0 50
SCALE 1"=50'

REV.	DESCRIPTION	DR.	APP'D	DATE

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DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

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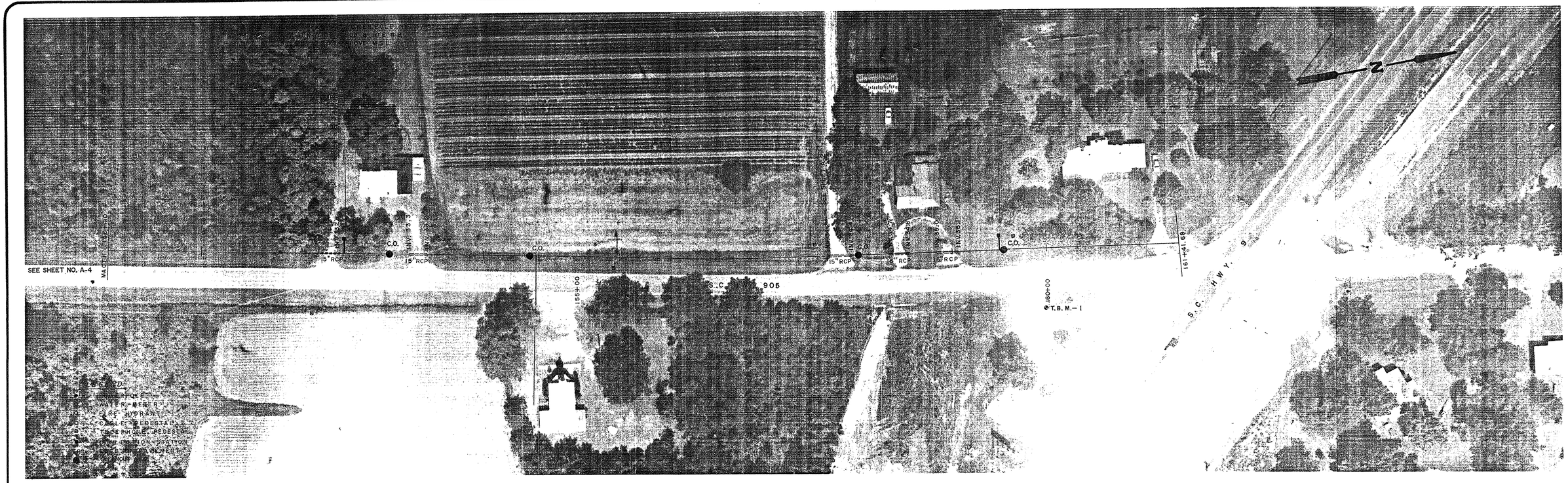
PROJECT
LONGS

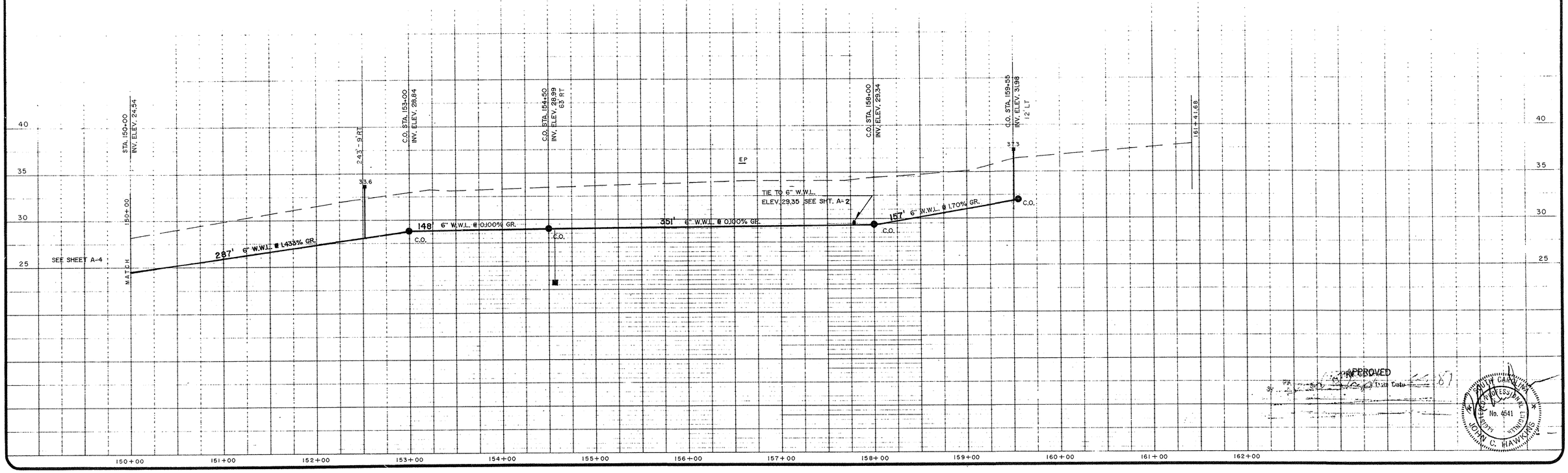
TITLE
PLAN - PROFILE
SHEET NO. A-2

GRAND STRAND WATER & SEWER AUTHORITY

SCALE	
HORIZONTAL	1"= 50'
VERTICAL	1"= 5'
PROJECT NUMBER	
SHEET NUMBER	A2
REV.	

25-07-057/5-s





APPROVED
Date

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 4541
JOHN C. HAWKINS

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0 50
SCALE: 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE

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DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

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EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
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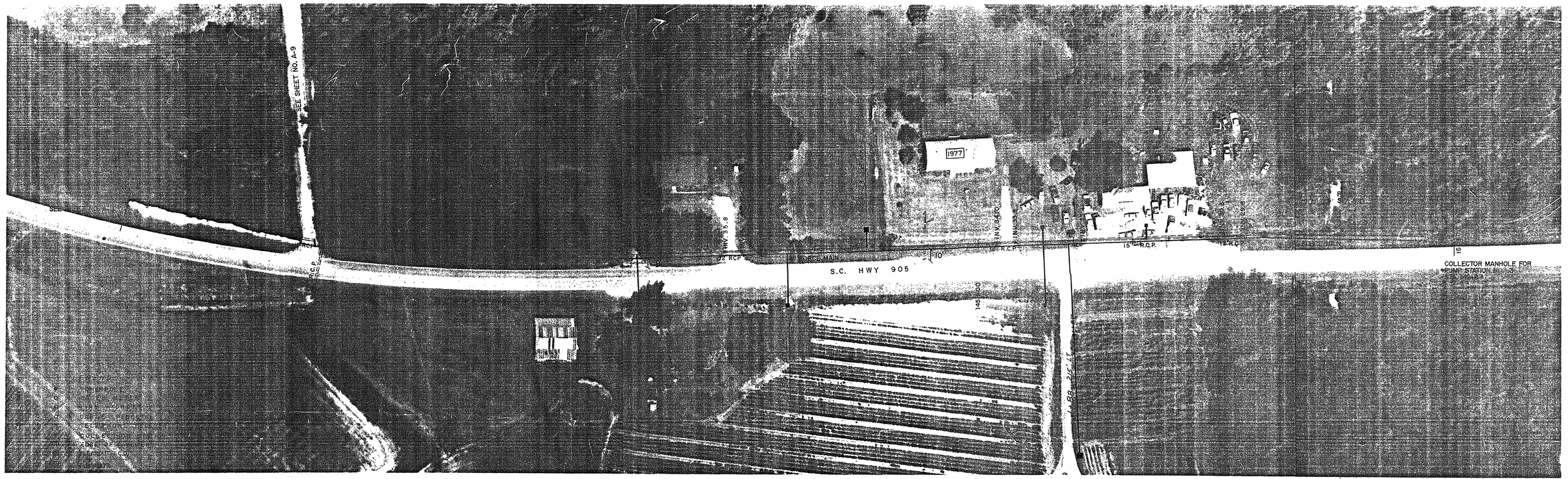
PROJECT
LONGS

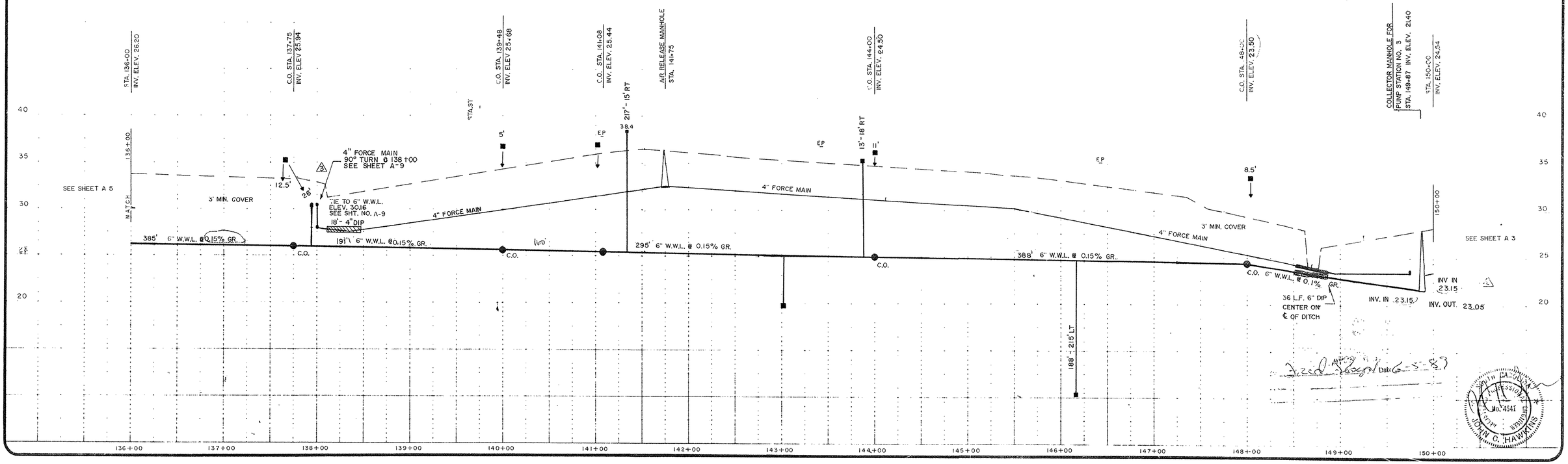
TITLE
PLAN - PROFILE
SHEET NO. A-3

GRAND STRAND WATER & SEWER AUTHORITY

SCALE	
HORIZONTAL	1" = 50'
VERTICAL	1" = 5'
PROJECT NUMBER	
SHEET NUMBER	REV.
A3	

25-07-057/6-s





REV	DESCRIPTION	DR	APPD	DATE
3	CHANGE FM. ROUTE			12/13/88
2	CHANGE F.M. INV. IN			5/11/87
1	MOVE P.S. - ADJUST GRADES			1/14/87

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0 50
SCALE 1" = 50'

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DRAWN DATE
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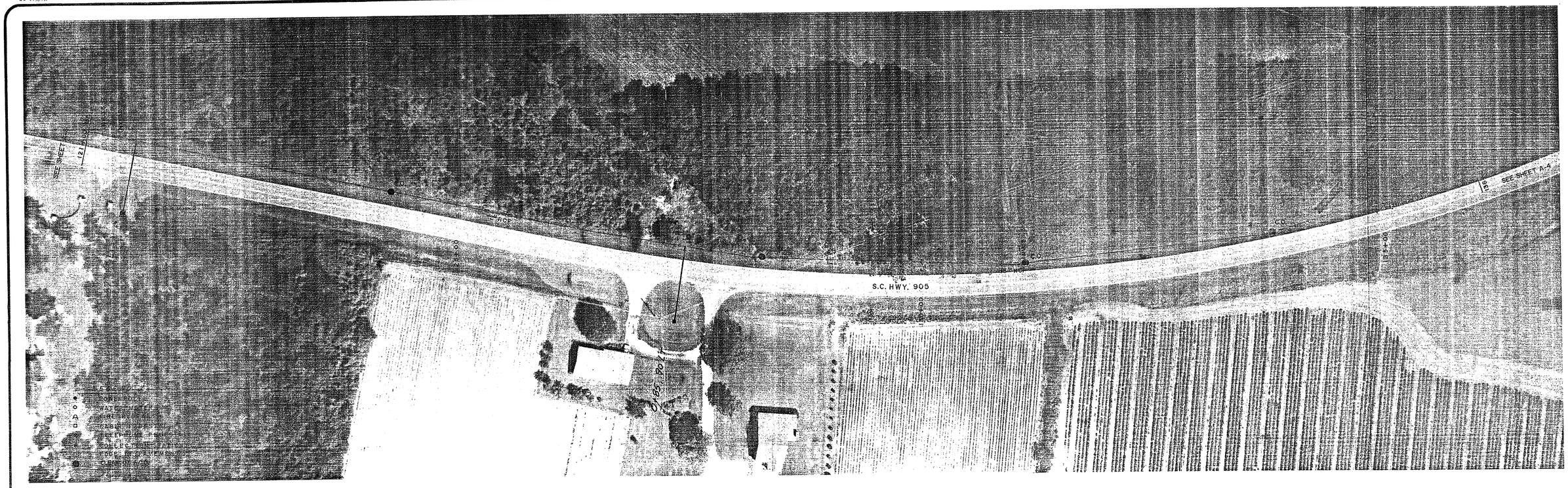
PROJECT
LONGS

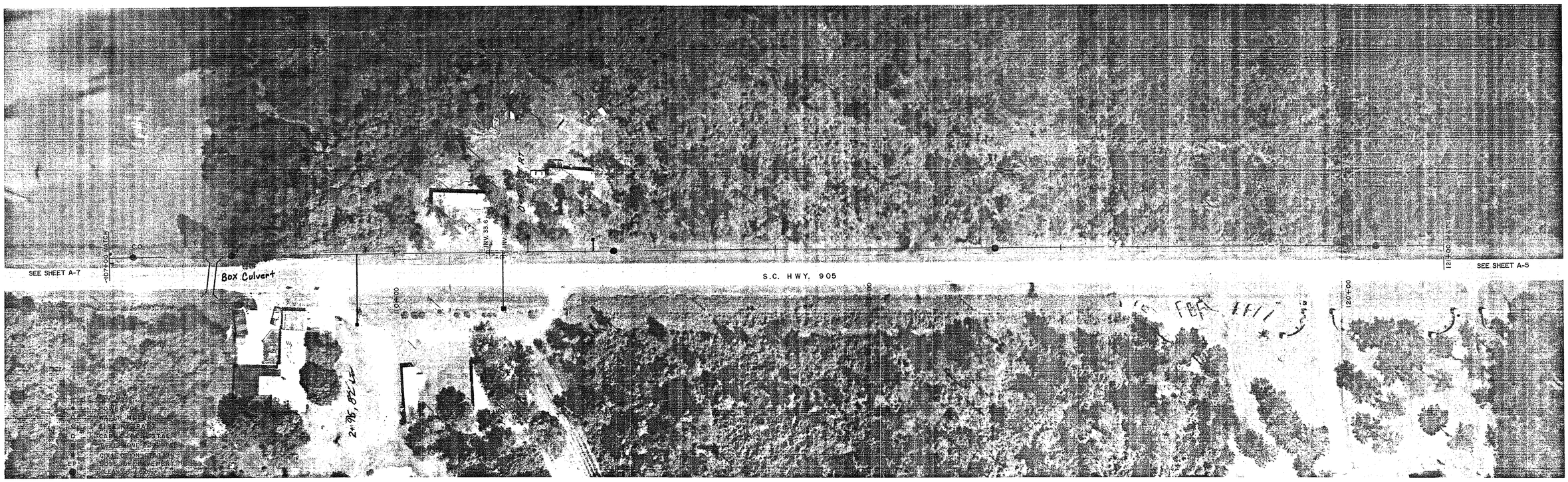
TITLE
PLAN - PROFILE
SHEET NO. A-4

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'
PROJECT NUMBER
SHEET NUMBER A4
REV

25-07-057/7-s

AE 37307A


SEE SHEET A-5
SEE SHEET A-4
S.C. HWY. 905
SOUTH
SOUTH
SOUTH



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0 50
SCALE 1"=50'

REV	DESCRIPTION	DR	APP'D	DATE
1	ELIMINATE F.M.			12/13/88

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APPROVED AUG. 1986 DATE
OWNER'S APPROVAL DATE

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EXECUTIVE DIRECTOR DOUGLAS P WENDEL
PROJECT MANAGER FRED R RICHARDSON

PREPARED BY
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BARTOW, FLORIDA

PROJECT: LONGS

TITLE: PLAN - PROFILE SHEET NO. A-6

GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER A6 REV.

PPROVED

Date

NO. 4541
JOHN G. HAWKINS

25-07-057/9-s



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0 50
SCALE 1"=50'

REV	DESCRIPTION	DR	APP'D	DATE
1	ELIMINATE F.M.			12/13/88

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DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

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EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

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PROJECT: LONGS

TITLE: PLAN - PROFILE SHEET NO. A-7

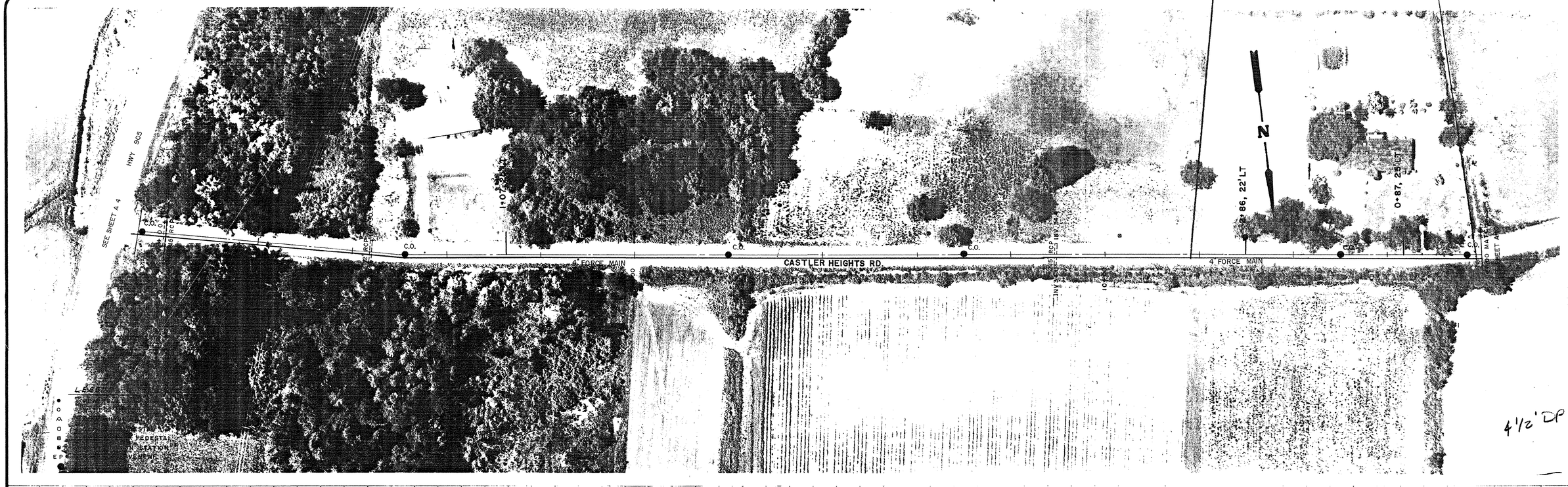
GRAND STRAND WATER & SEWER AUTHORITY

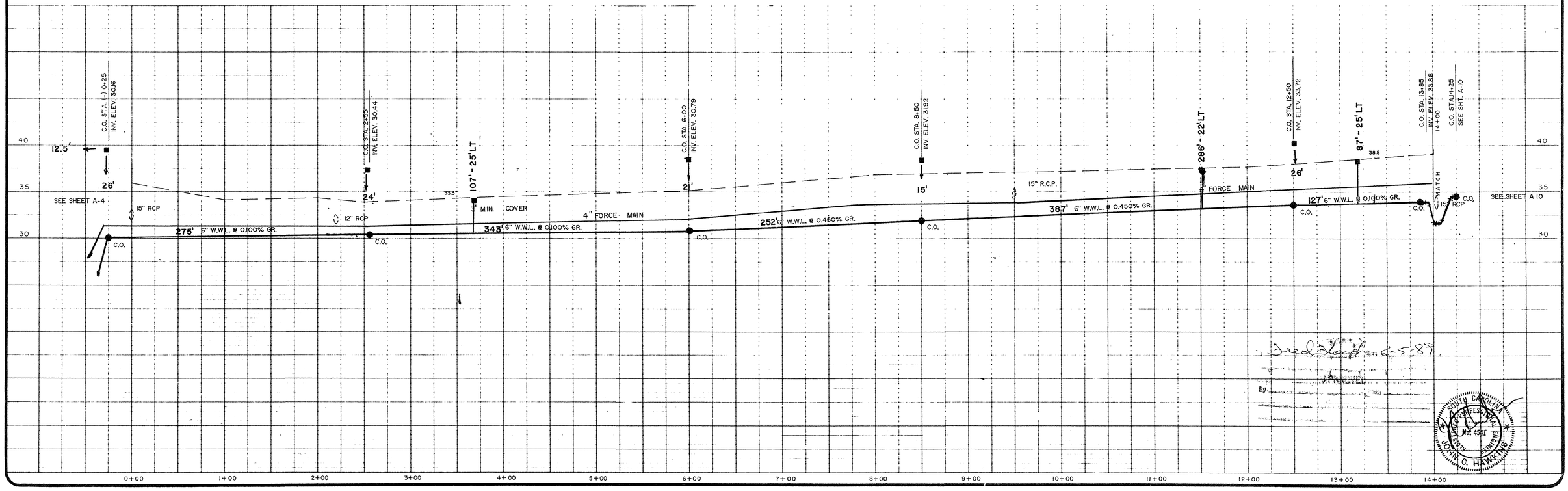
SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER A7 | REV

25-07-057/10-s





Dead Load 6-5-87

By

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 4591 JOHN C. HAWKINS

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0 50
SCALE: 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
1	ADD FORCE MAIN			12/13/88

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DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

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EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
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BARTOW, FLORIDA

PROJECT: LONGS

TITLE: PLAN - PROFILE SHEET NO. A-9

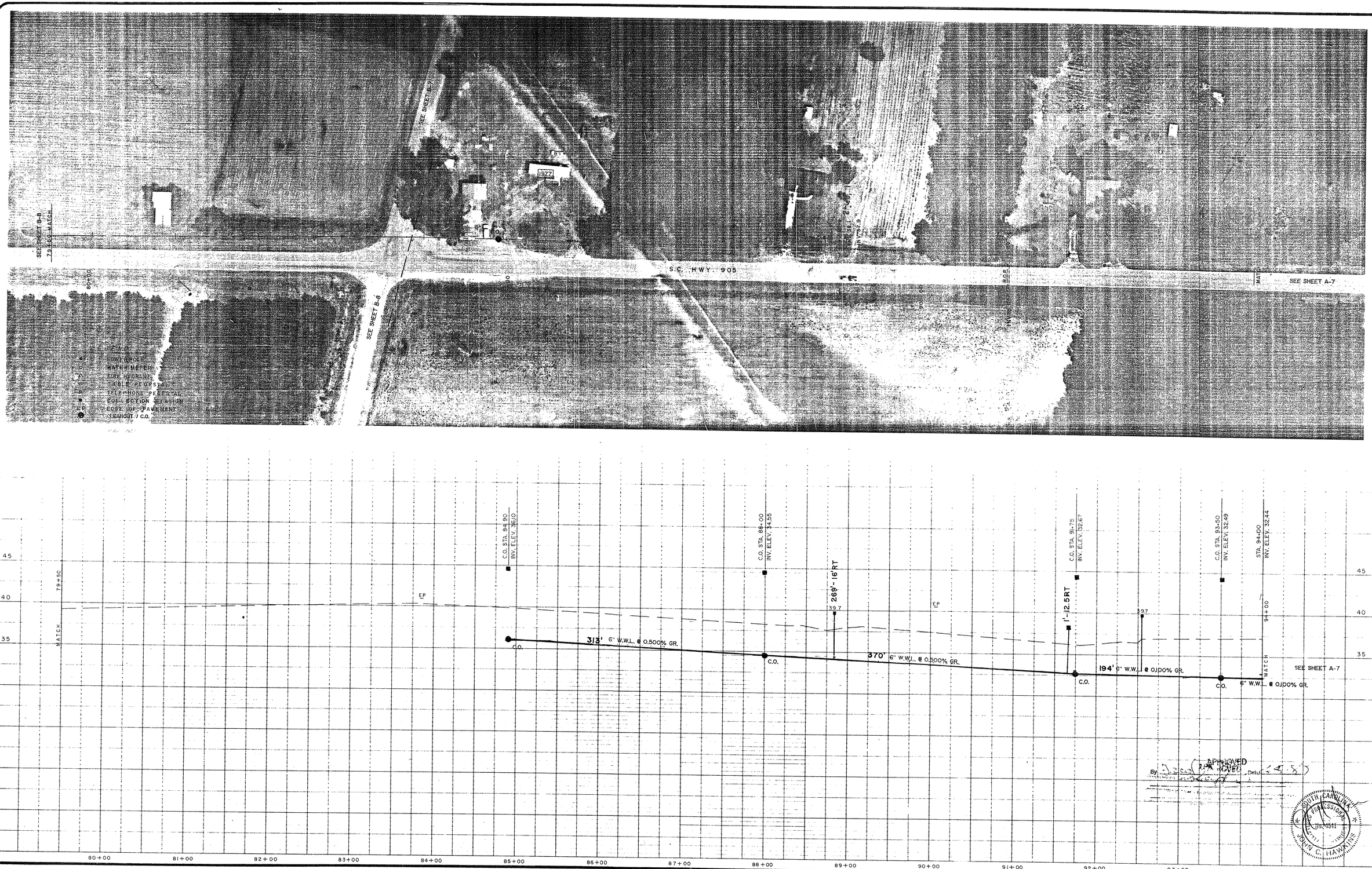
GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER A 9 | REV

25-07-057/12-s



APPROVED
J.A. HOLEY, Dmtr.

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 14541
JOHN C. HAWKINS

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0 50
SCALE 1" = 50'

REV	DESCRIPTION	BY	APP'D	DATE
2	ELIMINATE F.M.			12/13/88
1	Added Note	SRY		11/14/97

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SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN — DATE
CHECKED — DATE
APPROVED AUG. 1986 — DATE
OWNER'S APPROVAL — DATE

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P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR — DOUGLAS P. WENDEL
PROJECT MANAGER — FRED R. RICHARDSON

PREPARED BY
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BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. A-8

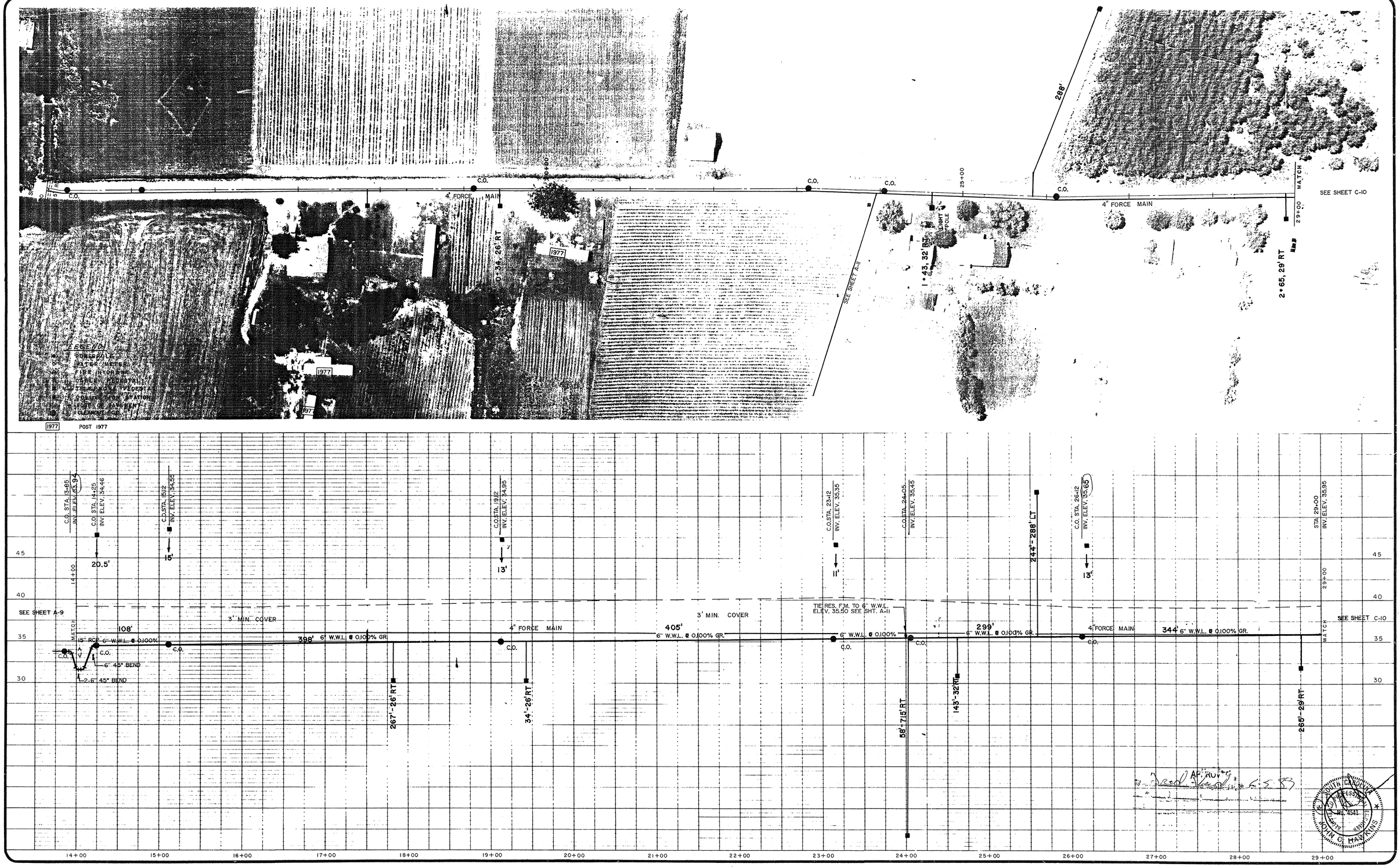
GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER A-8 — REV

25-07-057/II-s



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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
1	ADD FORCE MAIN			12/13/88

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SOUTH CAROLINA

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MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P O BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P WENDEL
PROJECT MANAGER FRED R RICHARDSON

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BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. A-10

GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER A10 | REV

25-07-057/13-s

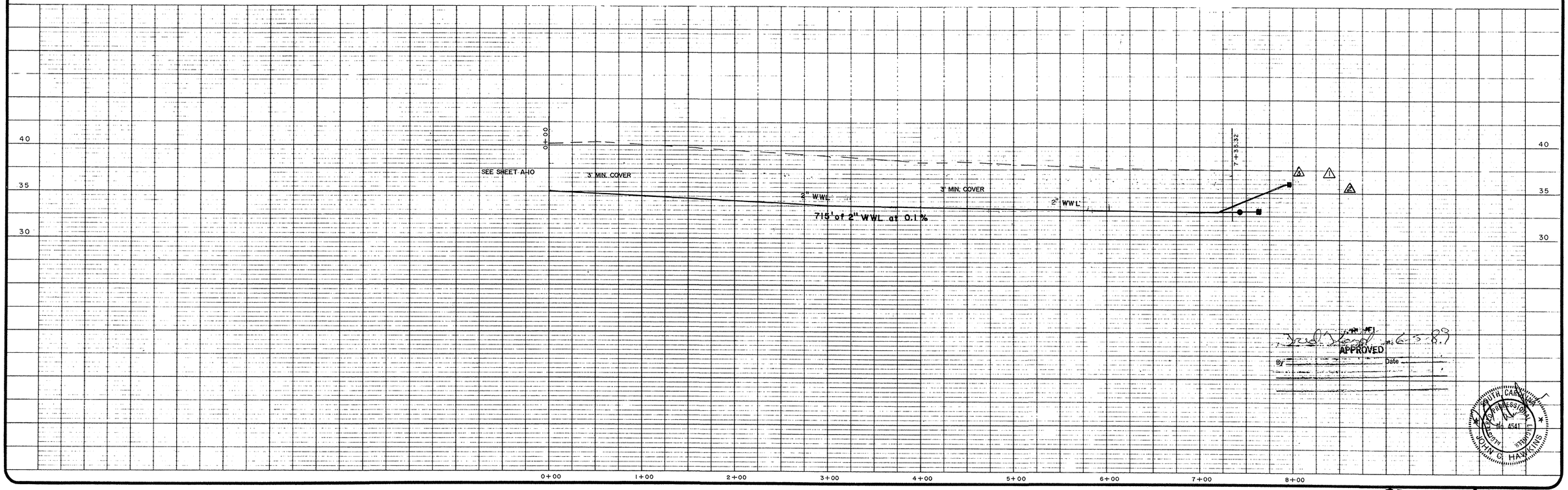
NORTH CAROLINA
PROFESSIONAL ENGINEER
NO. 4541
JOHN C. HAWKINS

AF 17307H



LEGEND

- POWERPOLE
- WATER METER
- FIRE HYDRANT
- CABLE PEDESTAL
- TELEPHONE PEDESTAL
- COLLECTION STATION
- EP EDGE OF PAVEMENT
- CLEANOUT / C.O.
- RESIDENTIAL PUMP



APPROVED

By _____ Date _____

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 4541 JOHN G. HAWKING

25-007-57/14-S

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0 50 SCALE: 1"=50'

REV.	DESCRIPTION	DR	APP'D	DATE
2	REPLACED RESIDE P.S. WITH COL. STA.			12/13/88
2	Changed Note @ Residential P.S.	SRY		11/17/87
1	DENOTE C @ RESID. P.S.			5/11/87

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT: LONGS

TITLE: PLAN - PROFILE SHEET NO. A-11

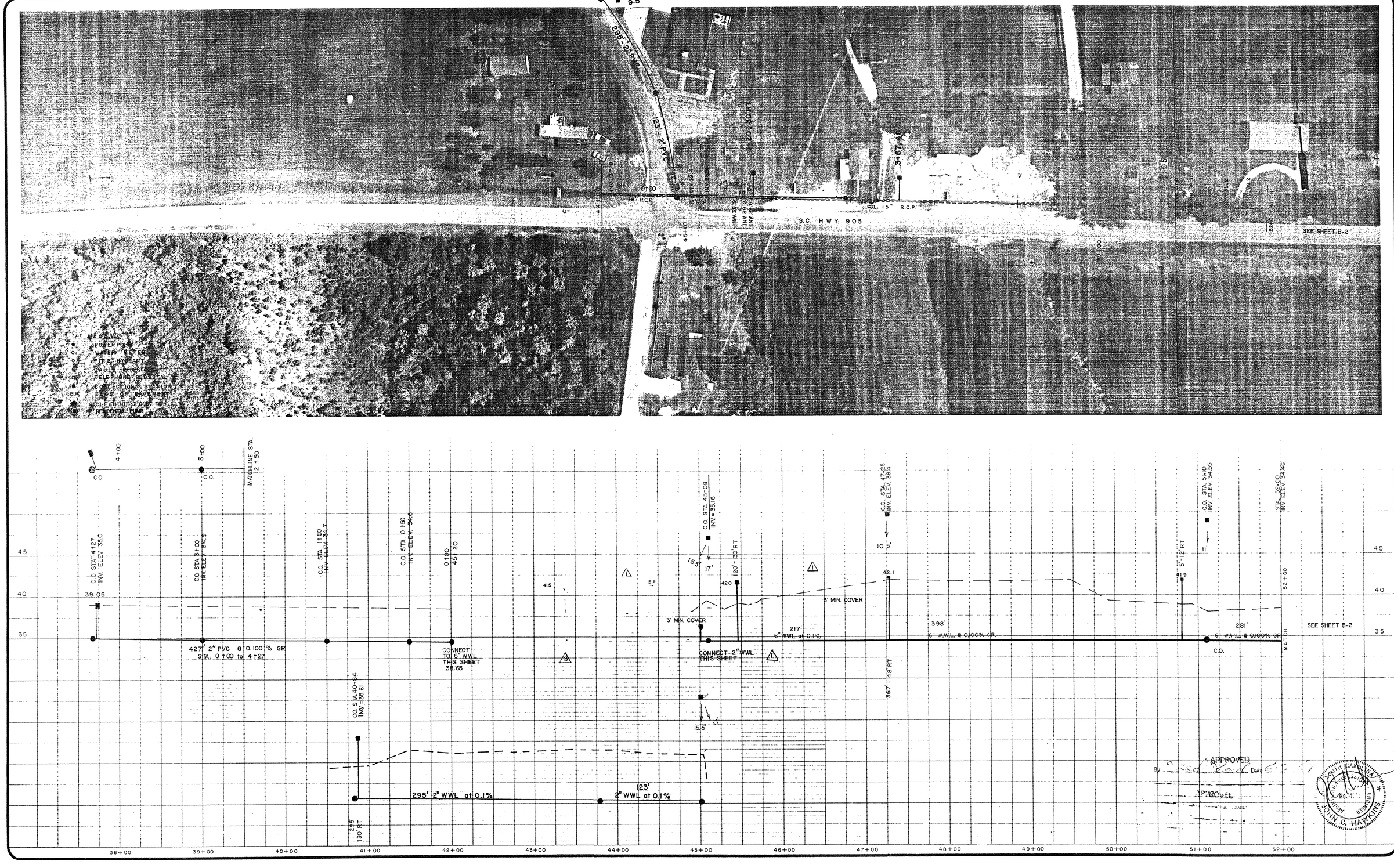
GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1"= 50'
VERTICAL 1"= 5'

PROJECT NUMBER

SHEET NUMBER A11 REV.

25-07-257/14



LEGEND

- PROPER POLE
- WATER METER
- FIRE HYDRANT
- CABLE PEDESTAL
- TELEPHONE PEDESTAL
- CONNECTION
- EDGE OF PAVEMENT
- CLEANOUT
- RESIDENTIAL ROOF

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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
4	ADD 427 L.F. 2" W.W.L.			12/27/88
3	SHOW STATIONING & GRADE OF D.I.P.			12-11-87
2	Revise Gravity Line & [illegible] S.S.H.			11/4/87
1	DENOTE A & B @ RESID. P.S.			5/11/87

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P O BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P WENDEL
PROJECT MANAGER FRED R RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

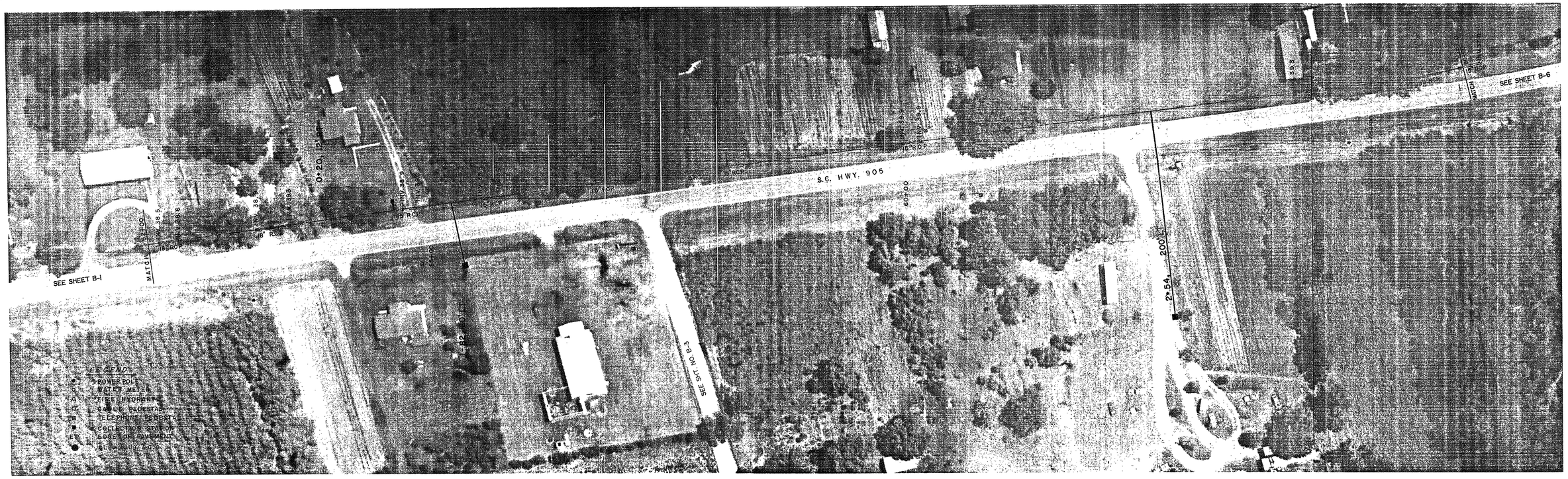
PROJECT
LONGS

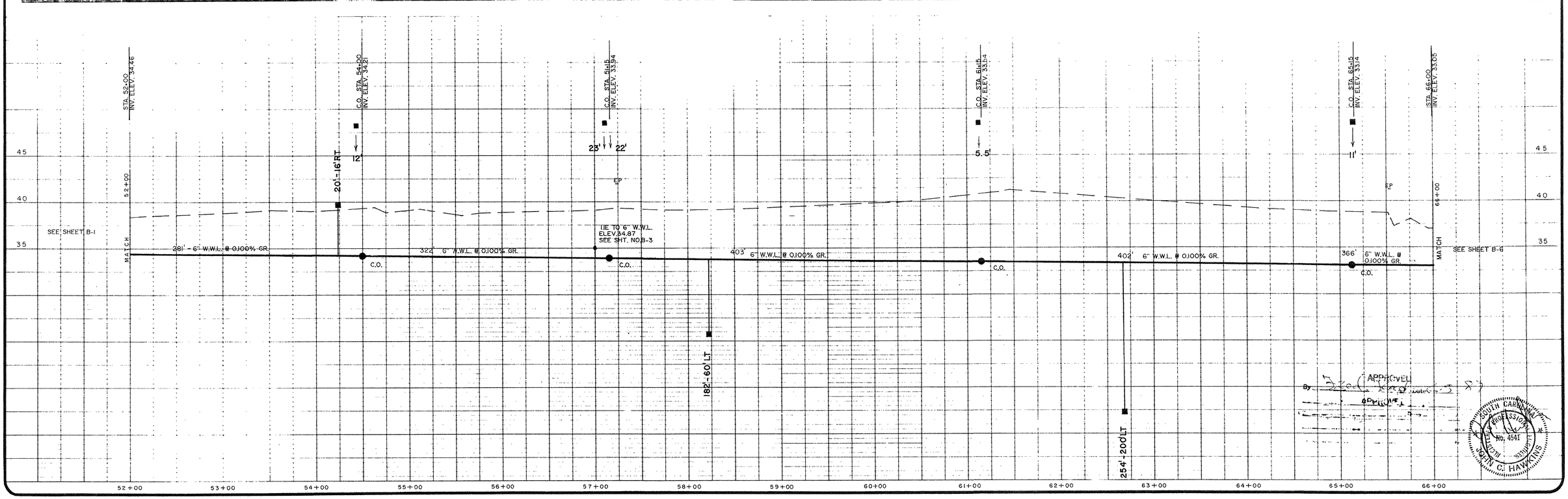
TITLE
PLAN - PROFILE
SHEET NO. B-1

GRAND STRAND WATER & SEWER AUTHORITY

SCALE	
HORIZONTAL	1" = 50'
VERTICAL	1" = 5'
PROJECT NUMBER	
SHEET NUMBER	B1
REV	

25-07-057/15-s





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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE

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SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P O BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P WENDEL
PROJECT MANAGER FRED R RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

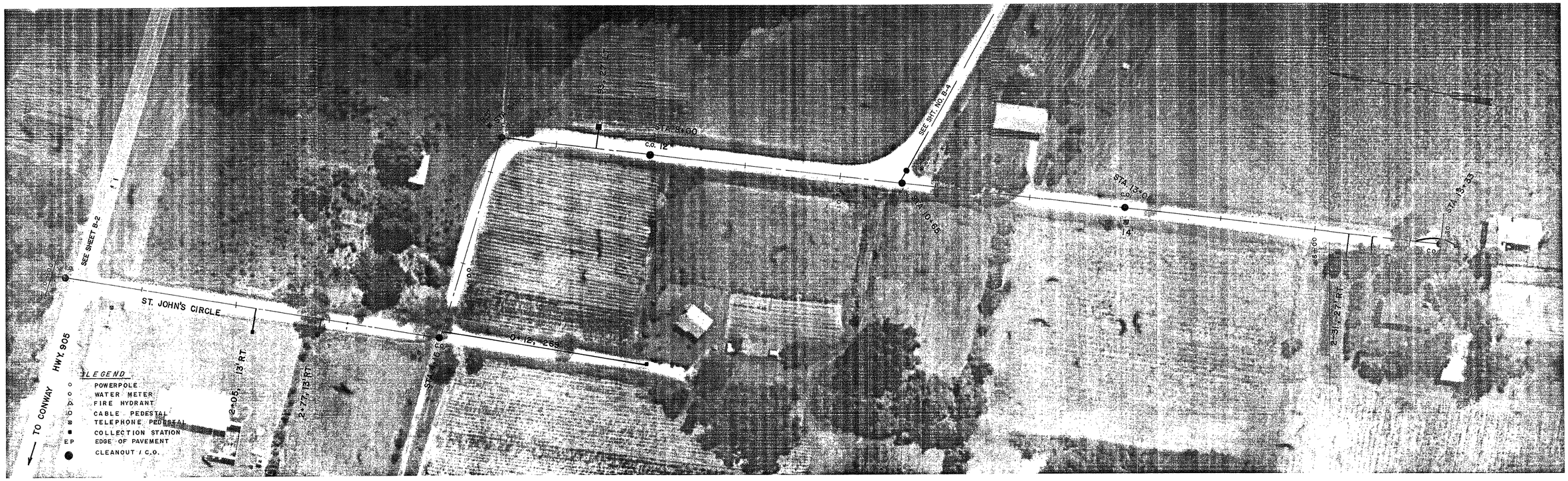
PROJECT
LONGS

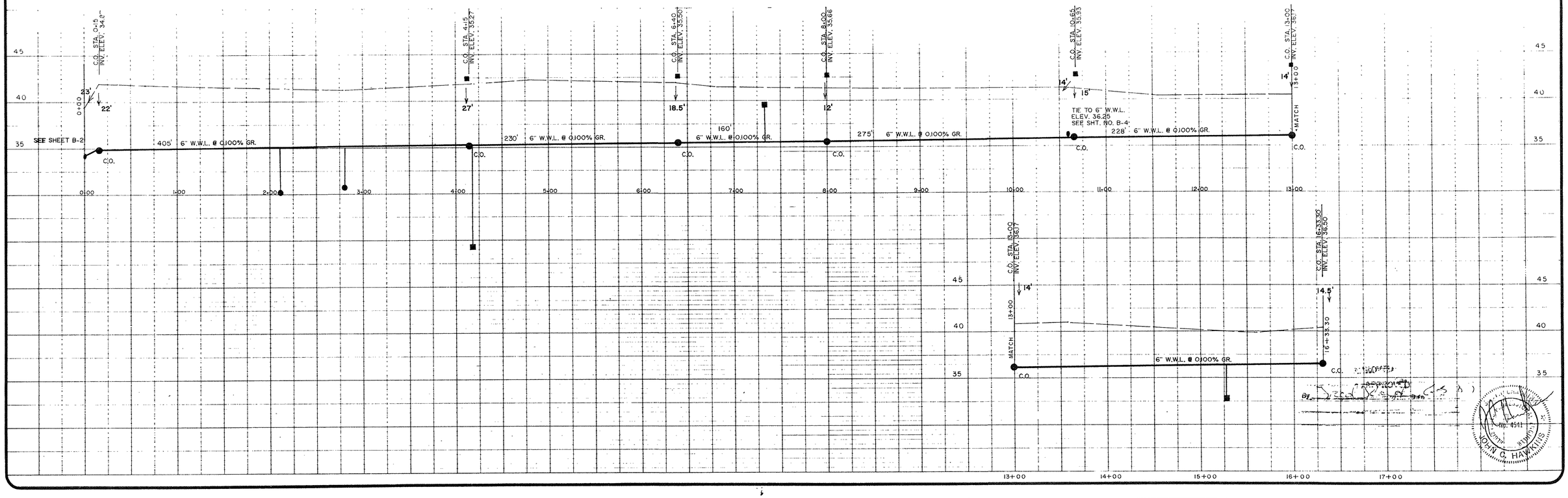
TITLE
PLAN - PROFILE
SHEET NO. B-2

GRAND STRAND WATER & SEWER AUTHORITY

SCALE	
HORIZONTAL	1" = 50'
VERTICAL	1" = 5'
PROJECT NUMBER	
SHEET NUMBER	REV
B 2	

25-07-057/16-s





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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR — DOUGLAS P. WENDEL
PROJECT MANAGER — FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. B-3

GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

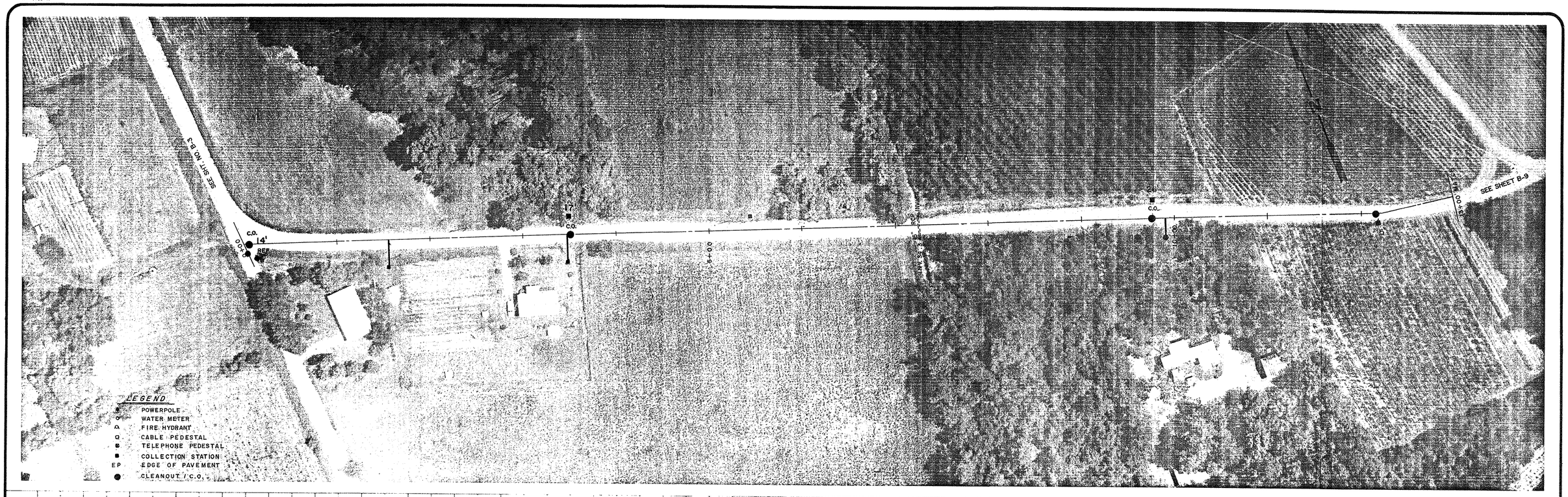
PROJECT NUMBER

SHEET NUMBER	REV
B3	

No. 4541
JOHN G. HAWKINS

25-07-057/17-S

AF 17307H



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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN DATE
CHECKED DATE
APPROVED AUG. 1986 DATE
OWNER'S APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. B-4

GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

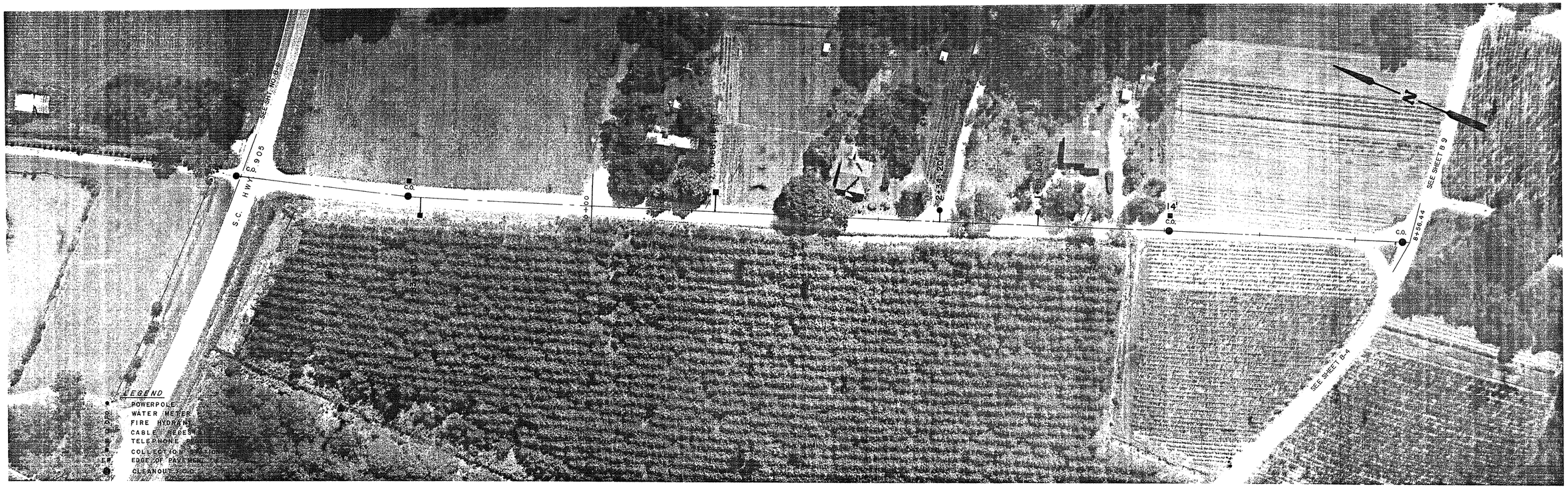
SHEET NUMBER B4 REV

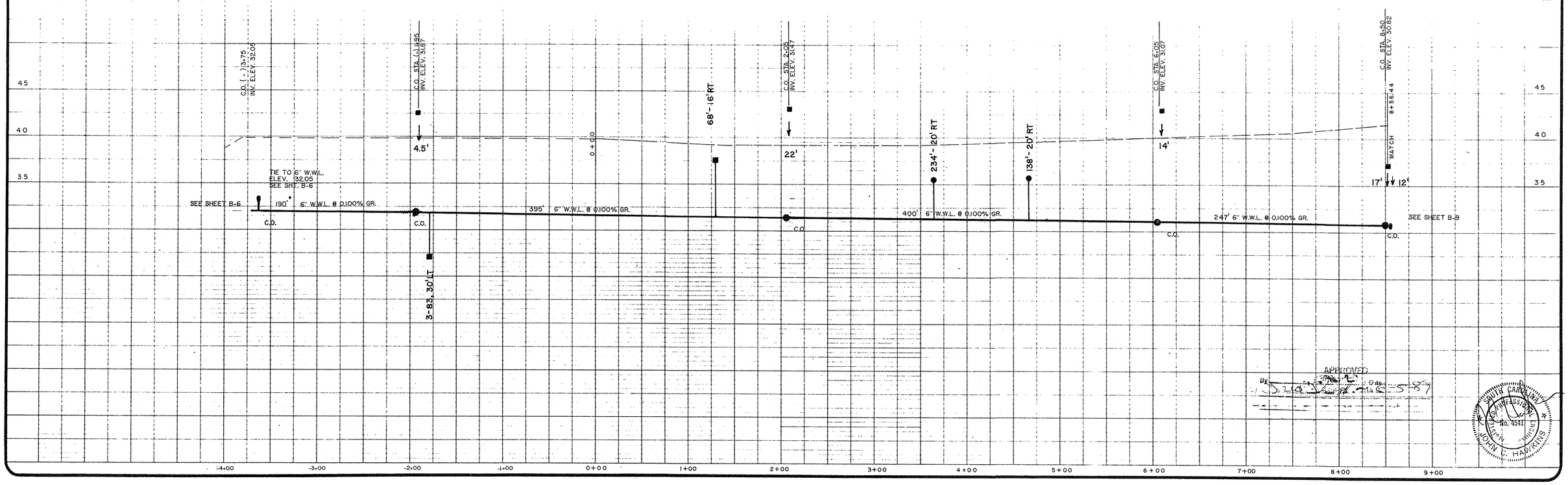
APPROVED
By Date

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 4541 JOHN D. HAWKINS

85-07-057H2

AE 17107A





APPROVED
BY _____ DATE _____

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 4541
JOHN C. HAWKINS

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0 50
SCALE: 1" = 50'

REV.	DESCRIPTION	DR	APP'D	DATE

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SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. B-5

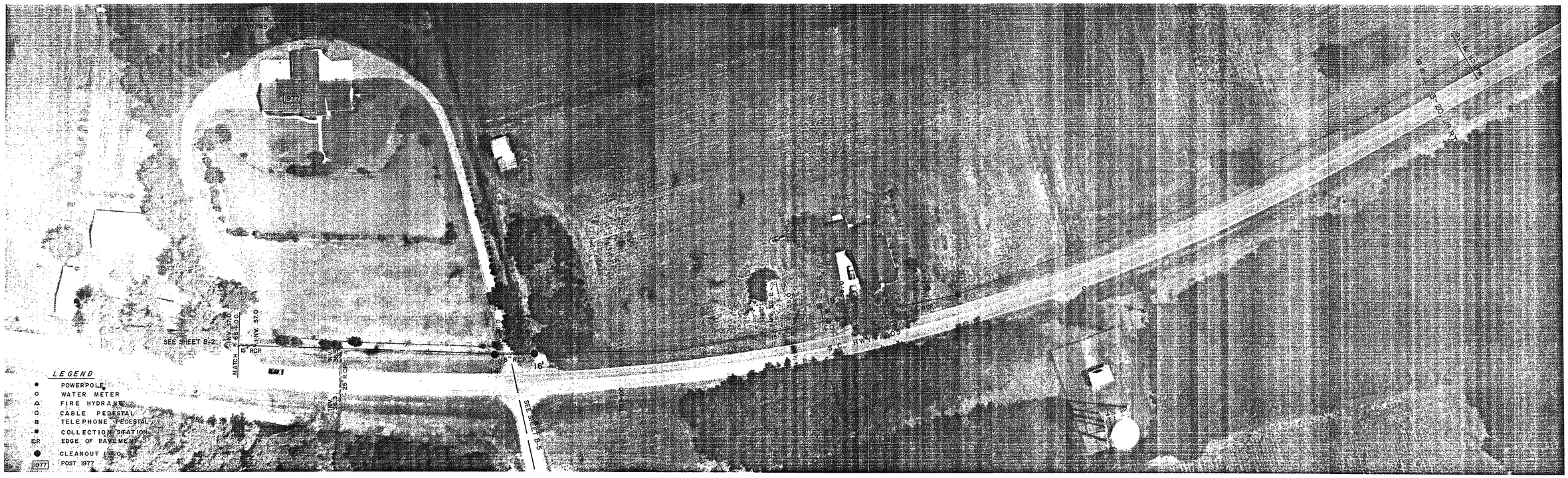
GRAND STRAND WATER & SEWER AUTHORITY

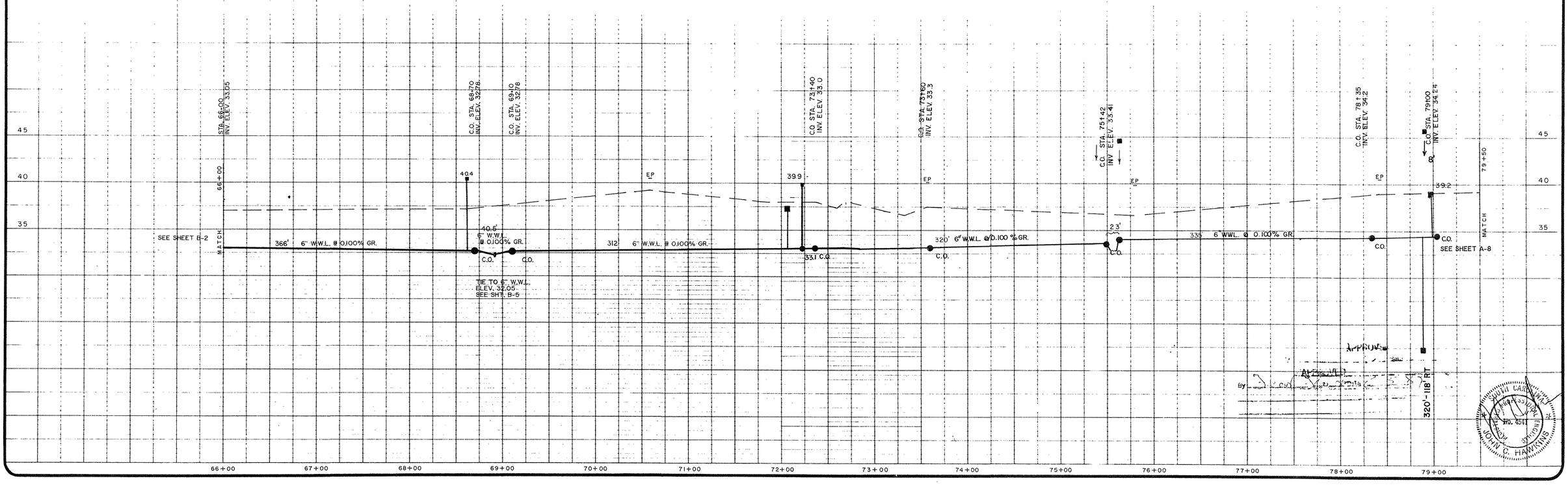
SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER B5 | REV

25-07-057/19-S





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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
1	ADD 660 L.F. 6" WWL			12/27/88

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN DATE
CHECKED DATE
APPROVED AUG. 1986 DATE
OWNER'S APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P O BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P WENDEL
PROJECT MANAGER FRED R RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. B-6

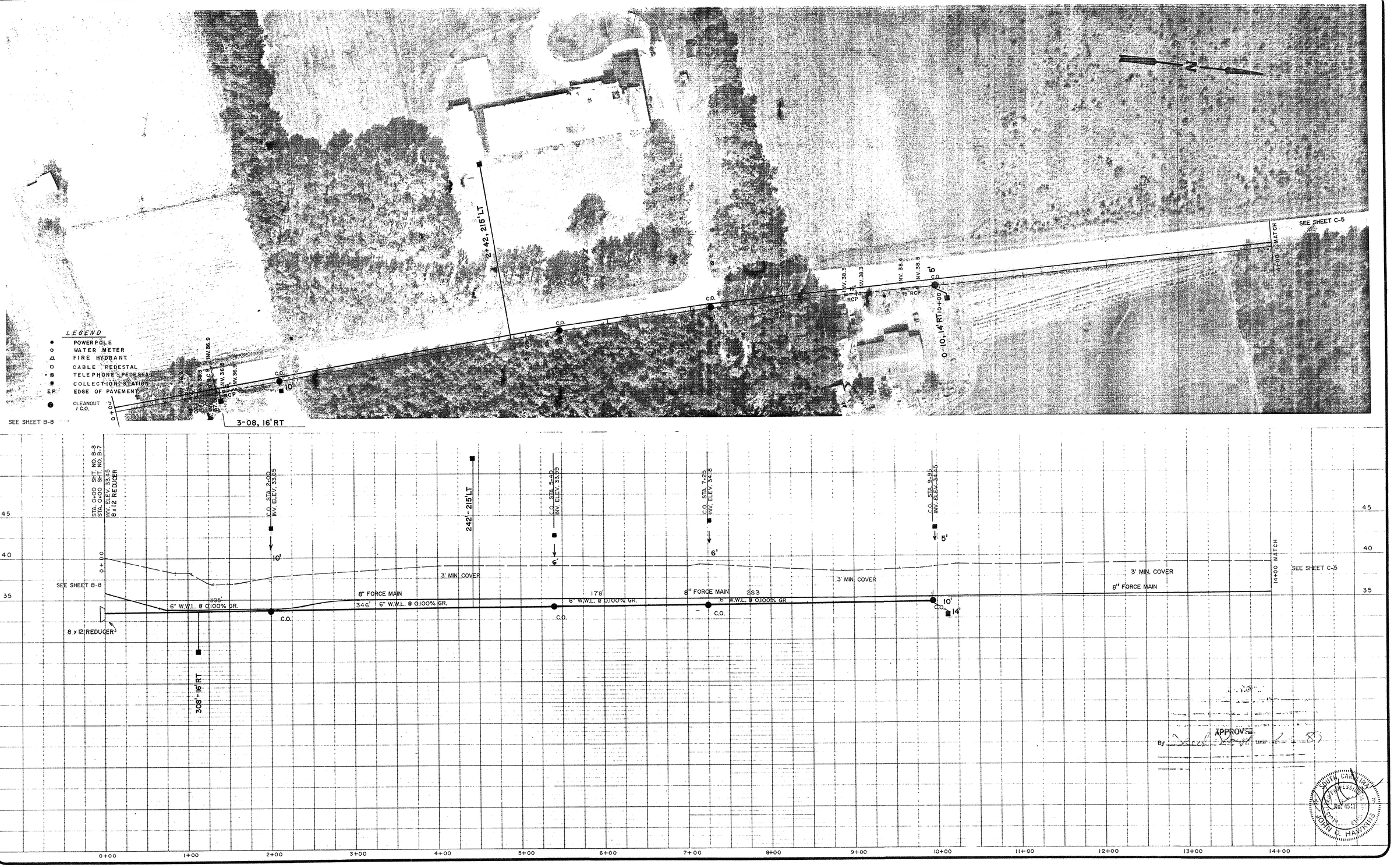
GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER B6 REV

25-07-057/20-s



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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
1	CHANGED FM. TO 8", ADD REDUCER			12/13/88

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN DATE
CHECKED DATE
APPROVED DATE
AUG. 1986
OWNER'S APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. B-7

GRAND STRAND WATER & SEWER AUTHORITY

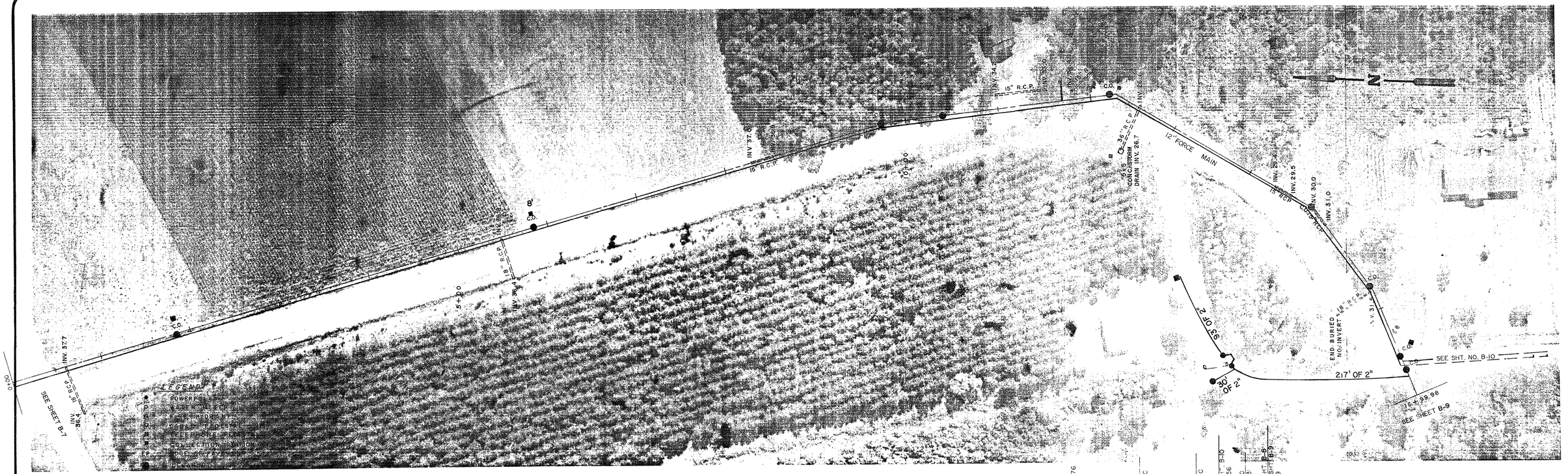
SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER 87

REV

25-07-057/21-s



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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
1	UPSIZE FORCE MAIN			1/8/89

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MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. B-8

GRAND STRAND WATER & SEWER AUTHORITY

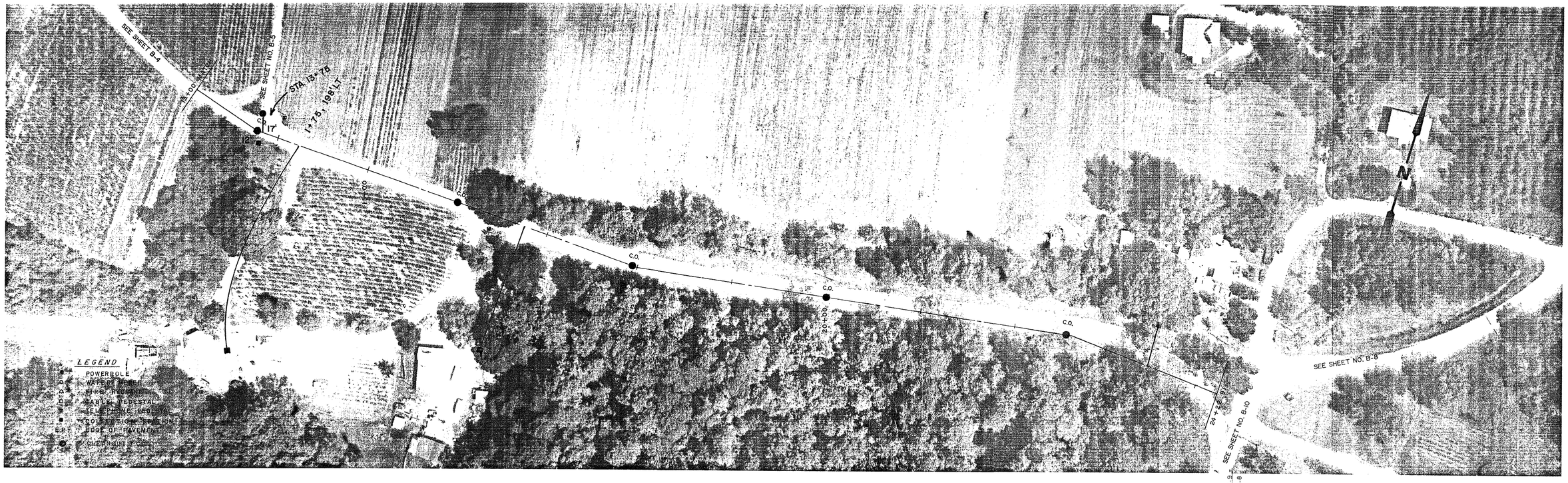
SCALE
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VERTICAL 1" = 5'

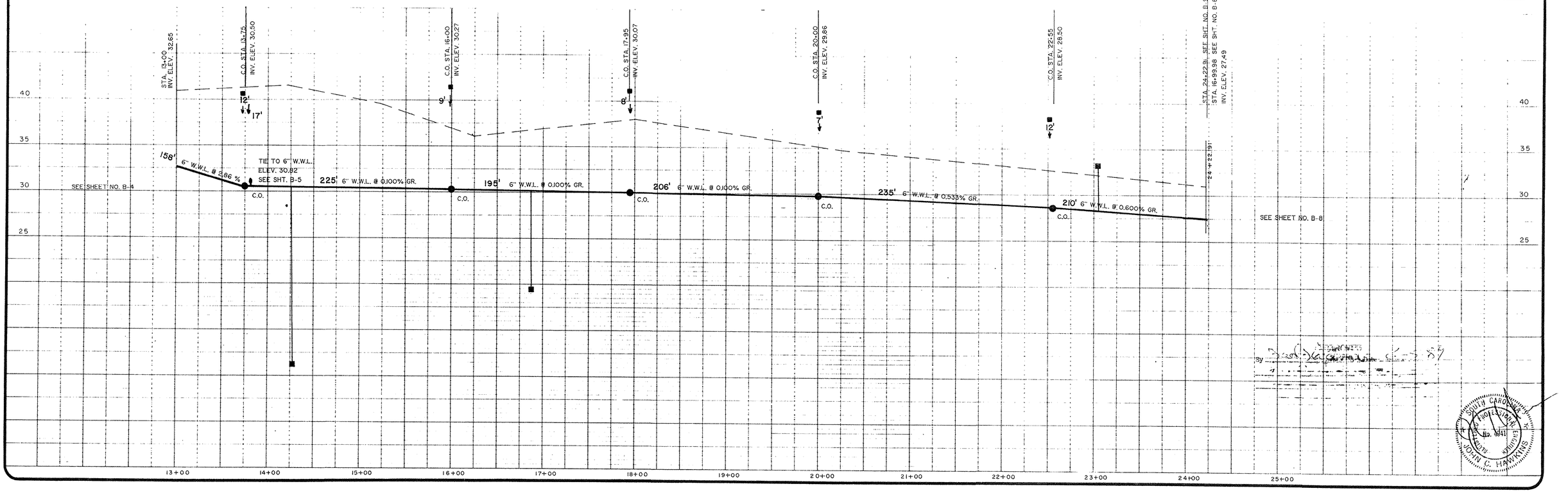
PROJECT NUMBER

SHEET NUMBER B 8

REV

25-07-057/22-s





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0 50
SCALE 1"=50'

REV	DESCRIPTION	DR	APP'D	DATE

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. B-9

GRAND STRAND WATER & SEWER AUTHORITY

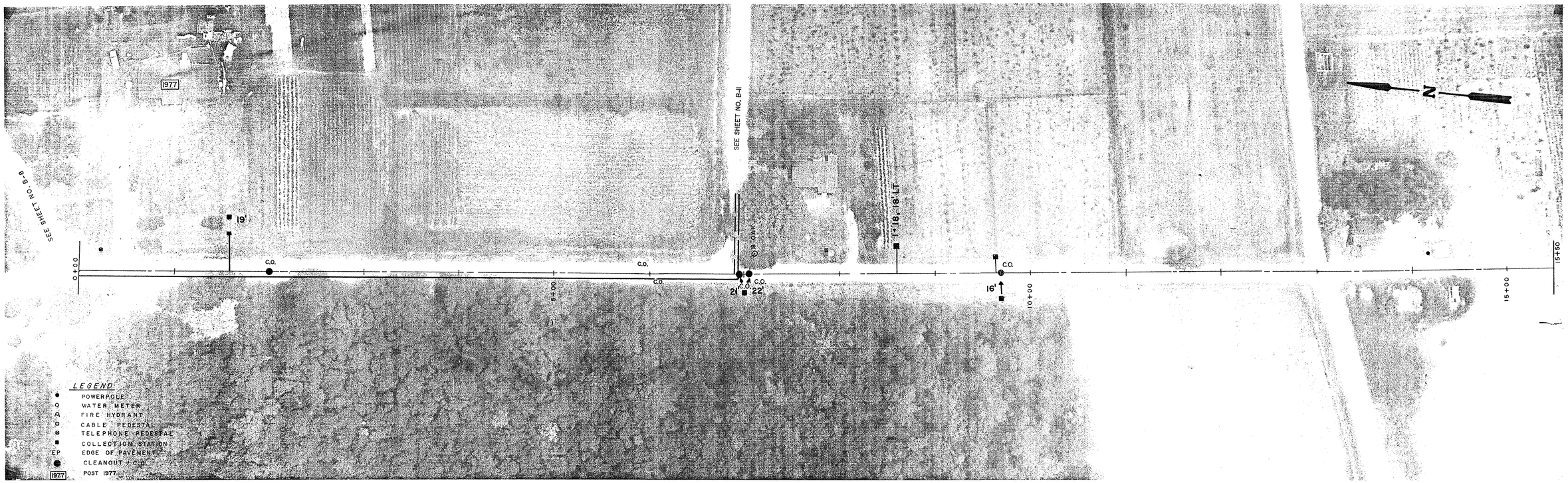
SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

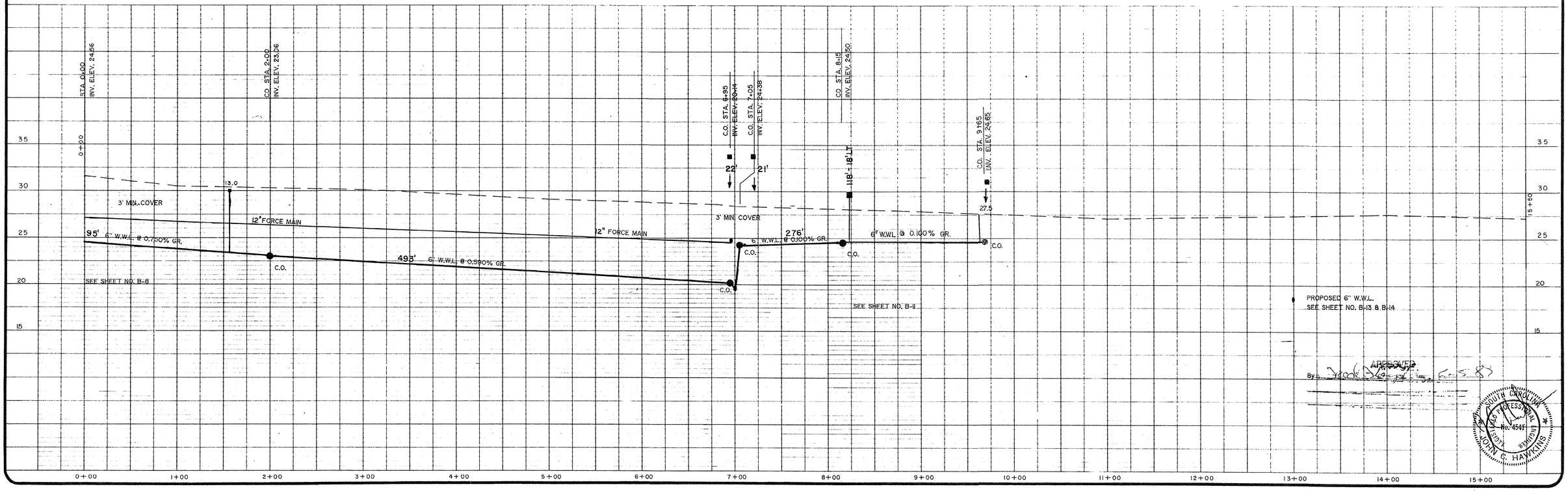
PROJECT NUMBER

SHEET NUMBER B9 | REV

25-07-057/23-s

AE 17078





APPROVED
By: _____ Date: _____

JOHN C. HAWKINS
No. 4541
REGISTERED PROFESSIONAL ENGINEER
SOUTH CAROLINA

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0 50
SCALE: 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
2	ADD 150 L.F 6" WWL			12/2/88
1	UP SIZE F.M.			12/13/88

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

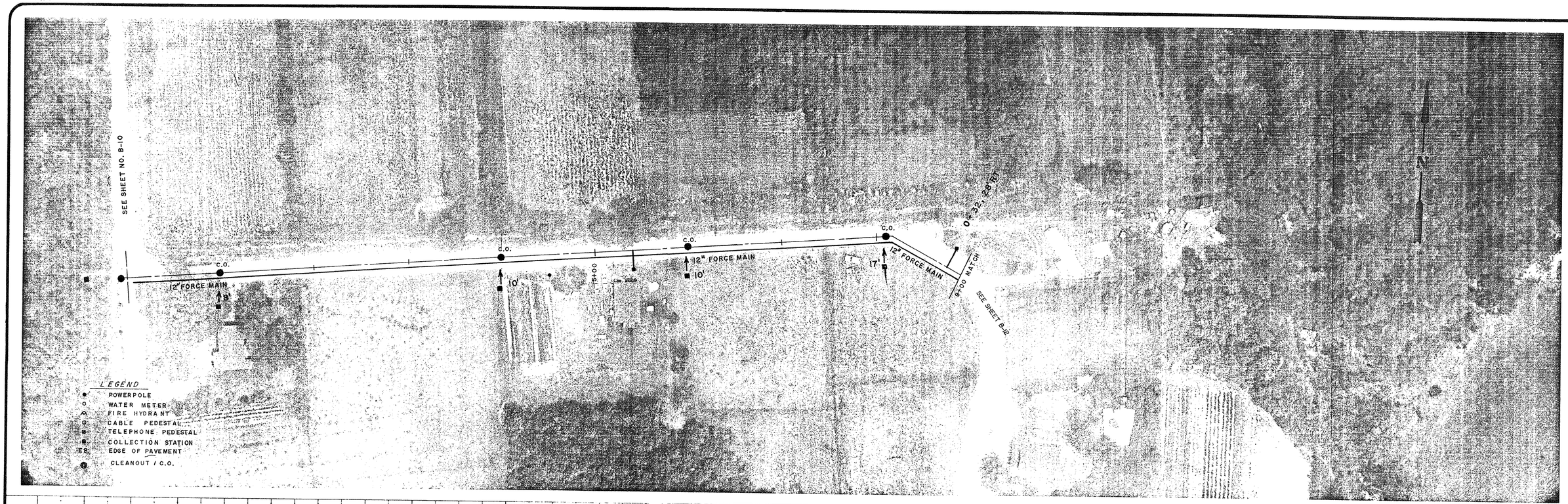
TITLE
PLAN - PROFILE SHEET NO. B-10

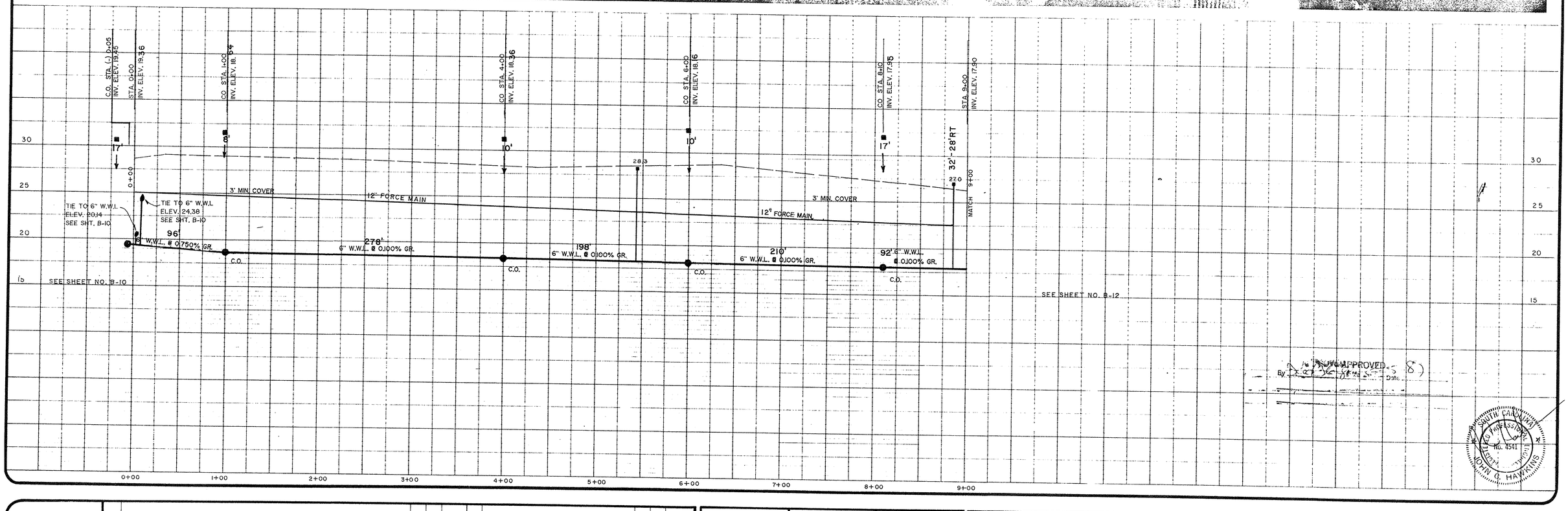
GRAND STRAND WATER & SEWER AUTHORITY

SCALE	
HORIZONTAL	1" = 50'
VERTICAL	1" = 5'
PROJECT NUMBER	
SHEET NUMBER	B10
REV.	

25-07-057/24-s

AF 17307M





APPROVED
By _____ Date 5/8

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
No. 4541
JOHN G. HAWKINS

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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
1	UP SIZE F.M.			12/13/88

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN DATE
CHECKED DATE
APPROVED AUG. 1986 DATE
OWNER'S APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P O BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P WENDEL
PROJECT MANAGER FRED R RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. B-11

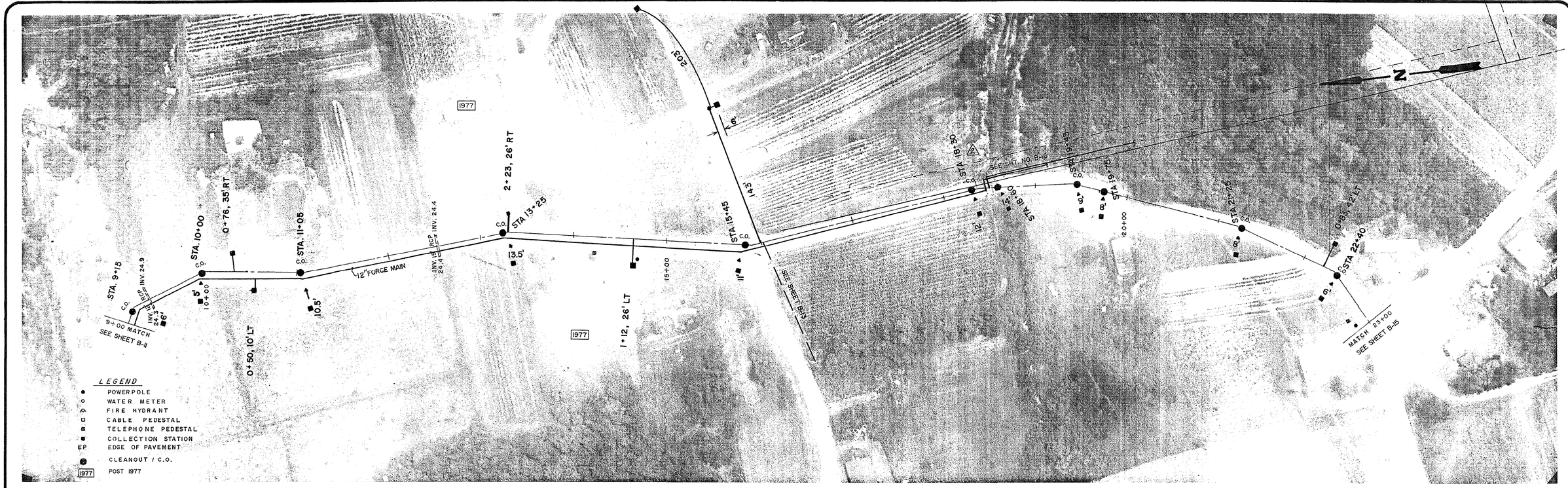
GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER B11

REV



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0 50
SCALE: 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
3	UP SIZE F.M.			12/3/88
2	REMOVE P.S., SHOW UTILITY EASEMENT, ADD C.O. & CHANGE GRADES NOTES.	RH	MCL	8/6/87
1	SHOW F.M. ADD NOTE	RH	MCL	5/11/87

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN DATE
CHECKED DATE
APPROVED AUG. 1986 DATE
OWNER'S APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. B-12

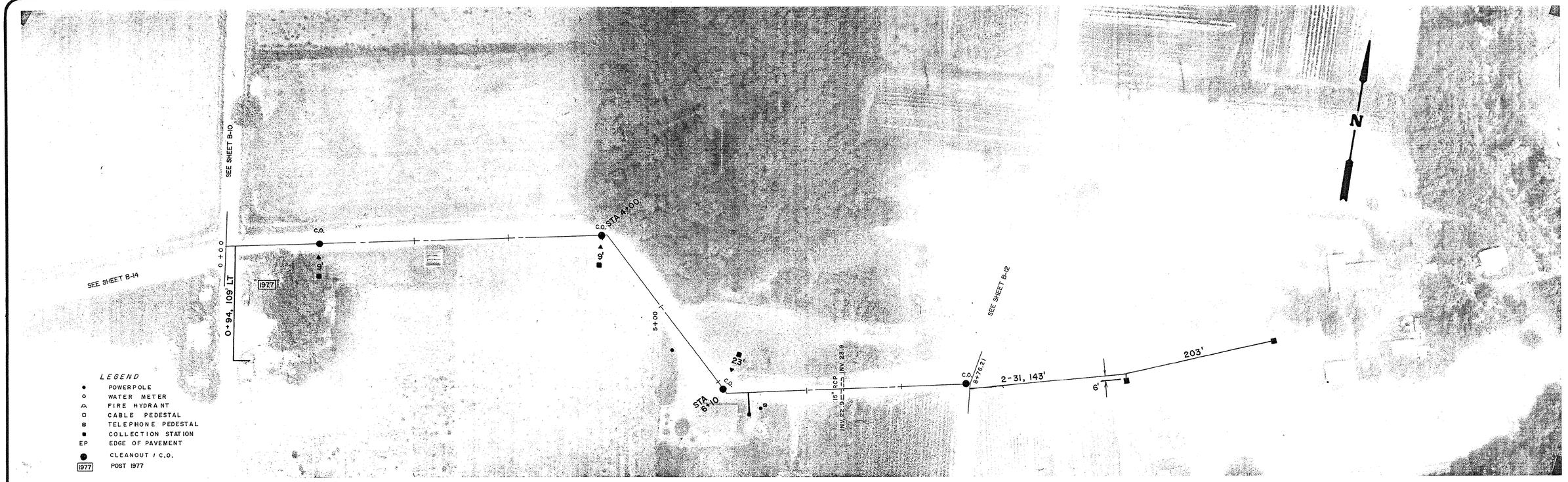
GRAND STRAND WATER & SEWER AUTHORITY

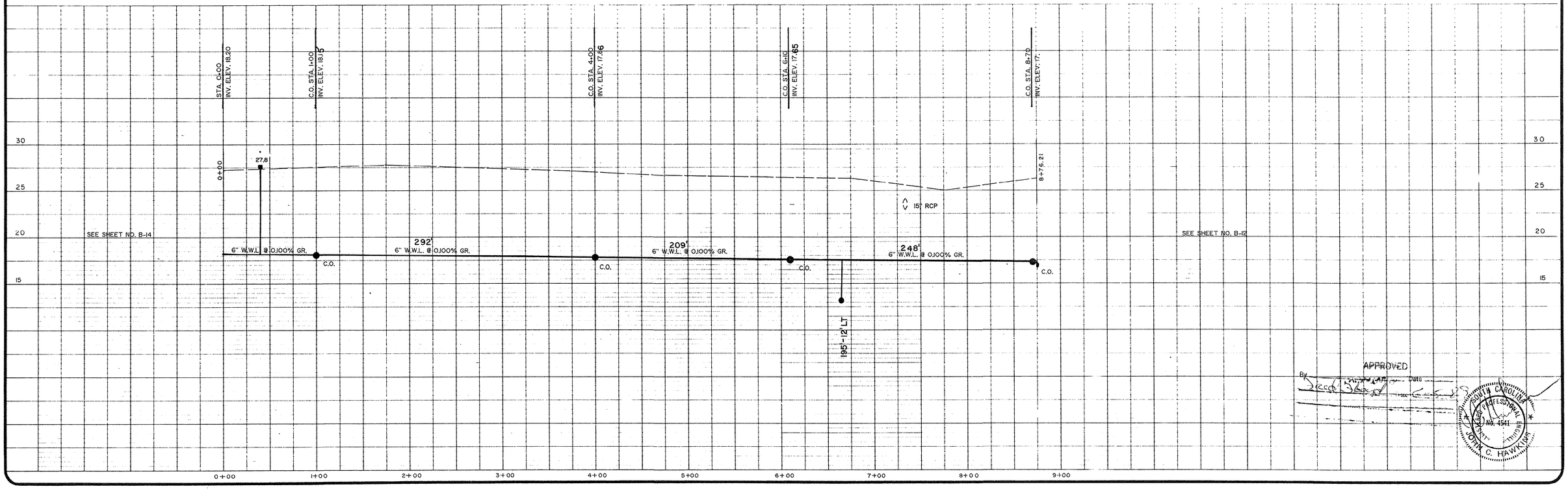
SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'
PROJECT NUMBER
SHEET NUMBER B12
REV.

APPROVED
APPROVED
SOUTH CAROLINA PROFESSIONAL ENGINEER No. 4341 JOHN C. HAWKINS

25-07-057/26-S

AE 173079





APPROVED
By _____ Date _____

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 4541 JOHN C. HAWKINS

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0 50
SCALE 1" = 50'

REV.	DESCRIPTION	DR	APP'D	DATE

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MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN DATE
CHECKED DATE
APPROVED AUG. 1986 DATE
OWNER'S APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
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BARTOW, FLORIDA

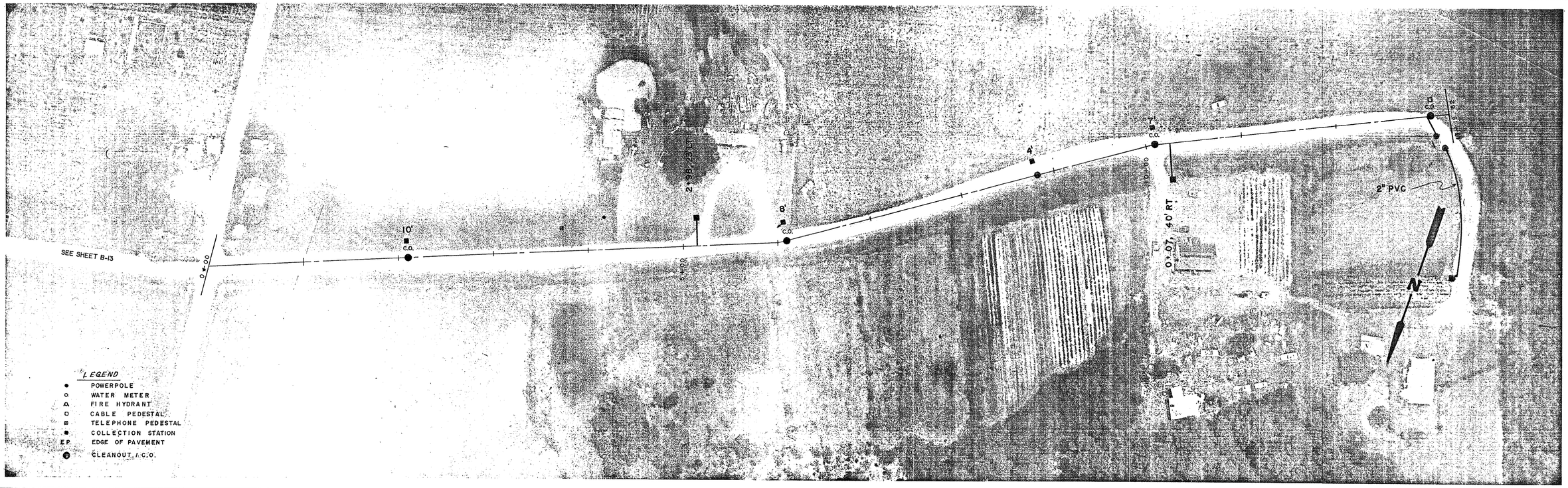
PROJECT
LONGS
TITLE
PLAN - PROFILE
SHEET NO. B-13

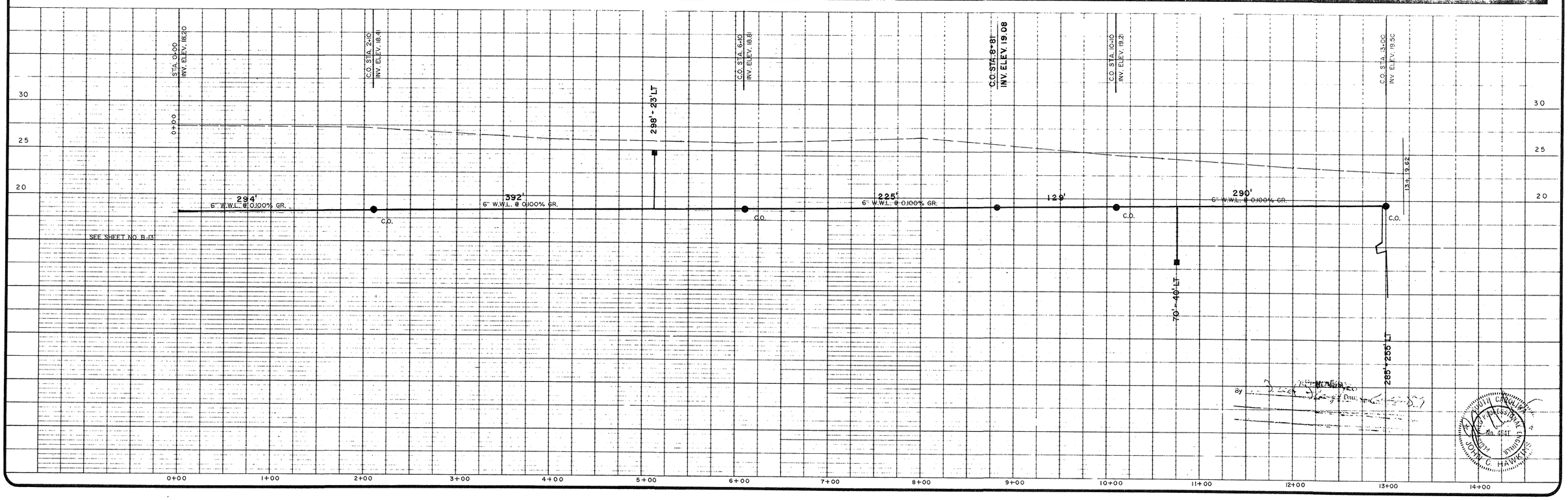
GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'
PROJECT NUMBER
SHEET NUMBER B13
REV.

25-07-057/27-s

AF 373078





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0 — 50
SCALE: 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE

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SOUTH CAROLINA

ENGINEERING BY
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MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR — DOUGLAS P. WENDEL
PROJECT MANAGER — FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT: LONGS

TITLE: PLAN - PROFILE
SHEET NO. B-14

GRAND STRAND WATER & SEWER AUTHORITY

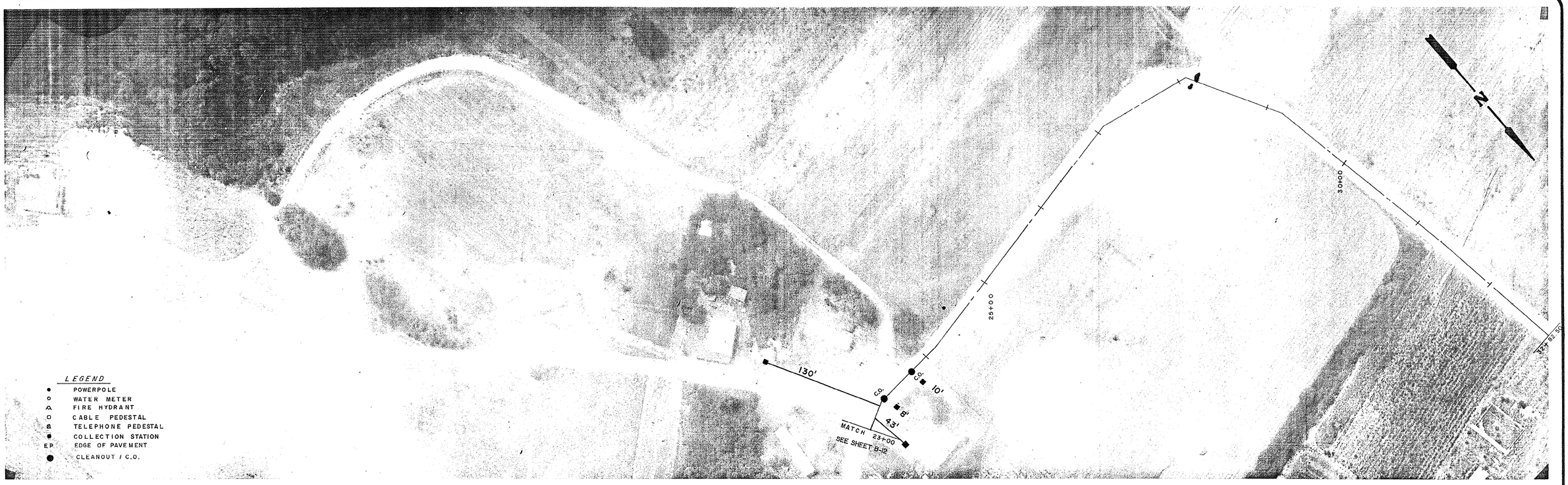
SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER: B 14 — REV

25-07-057/28-c

AF 373078



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0 50
SCALE: 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE

SURVEYED AND MAPPED BY
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MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

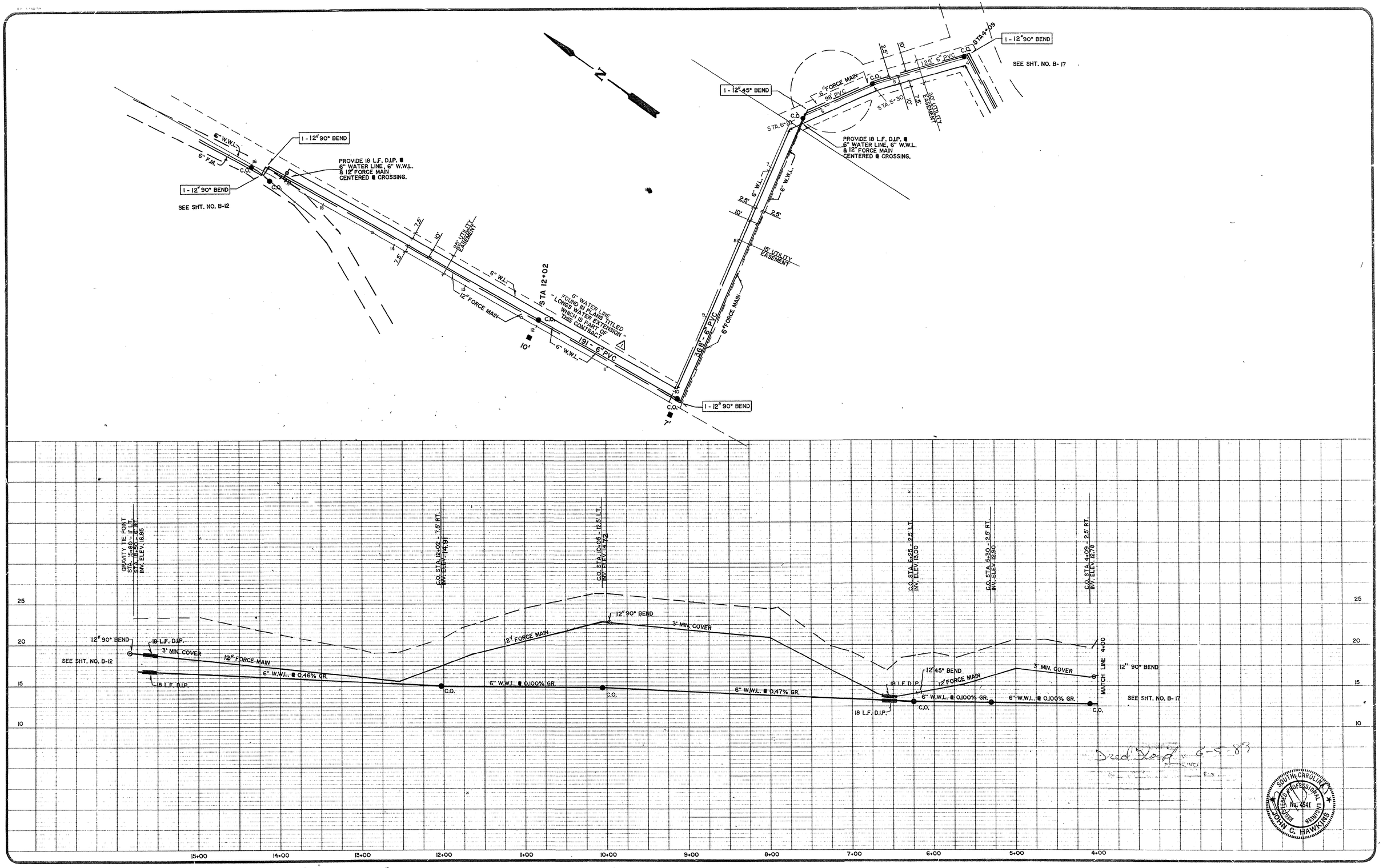
PROJECT: LONGS

TITLE: PLAN - PROFILE SHEET NO. B-15

GRAND STRAND WATER & SEWER AUTHORITY

SCALE	HORIZONTAL 1" = 50' VERTICAL 1" = 5'
PROJECT NUMBER	
SHEET NUMBER	B15
REV	

25-07-057/29-s



Dead End 6-5-87

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER JOHN G. HAWKINS No. 4541

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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR.	APP'D	DATE
2	UP SIZE F.M.			12/3/87
1	REV. EASEMENT, F.M., & W.W.L.	RJH		8/6/87

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1987	DATE
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
SARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET No. B-16

GRAND STRAND WATER & SEWER AUTHORITY

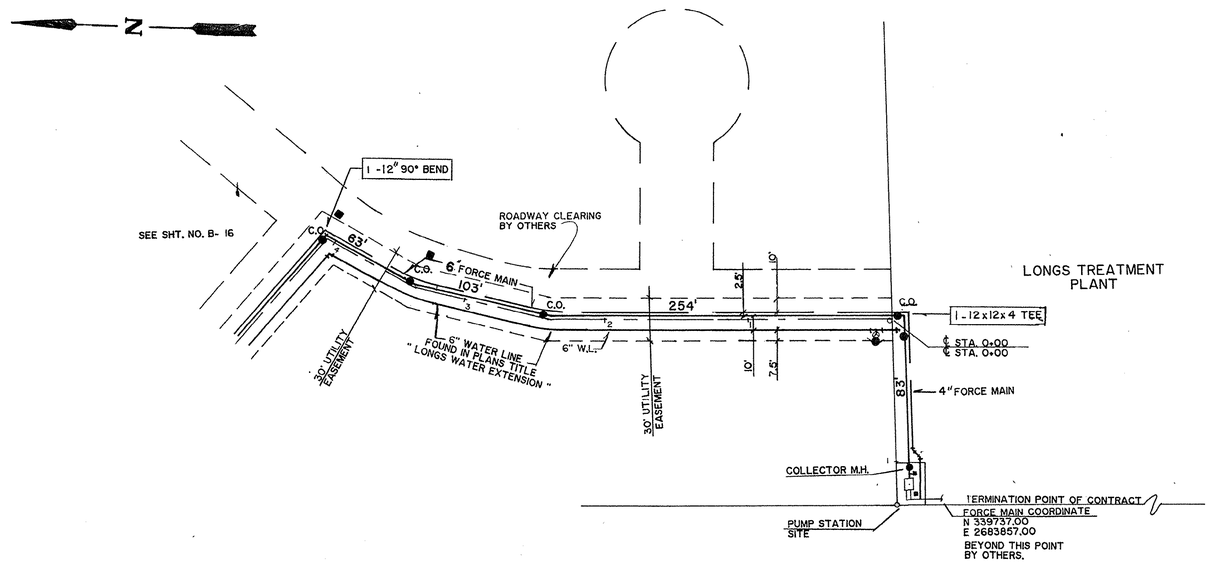
SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

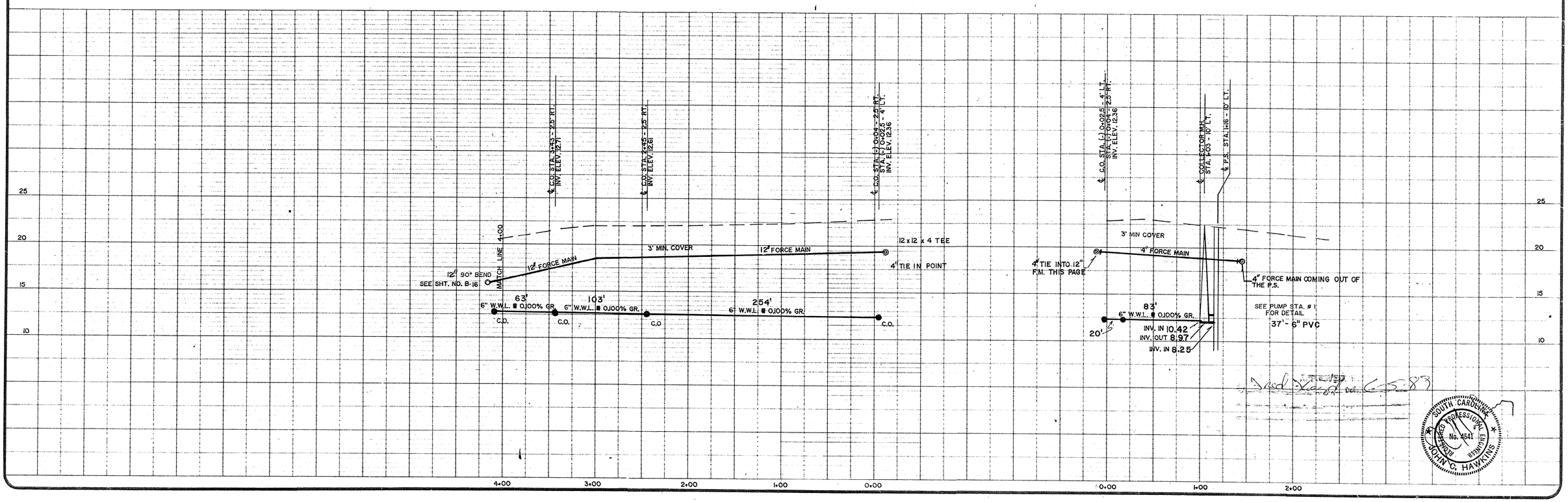
PROJECT NUMBER

SHEET NUMBER B-16

REV

25-07-057/30-s





Fred Vaught Dec. 6 5.83

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 4841 JOHN C. HAWKINS

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0 50
SCALE 1"=50'

REV	DESCRIPTION	DR	APP'D	DATE
2	UP SIZE F.M. & REROUTE REV. EASEMENT, F.M. & W.W.L. ADD TO PLANS			12/13/88
				8/6/87

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SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN — DATE
CHECKED — DATE
APPROVED AUG. 1987 — DATE
OWNER'S APPROVAL — DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET No. B- 17

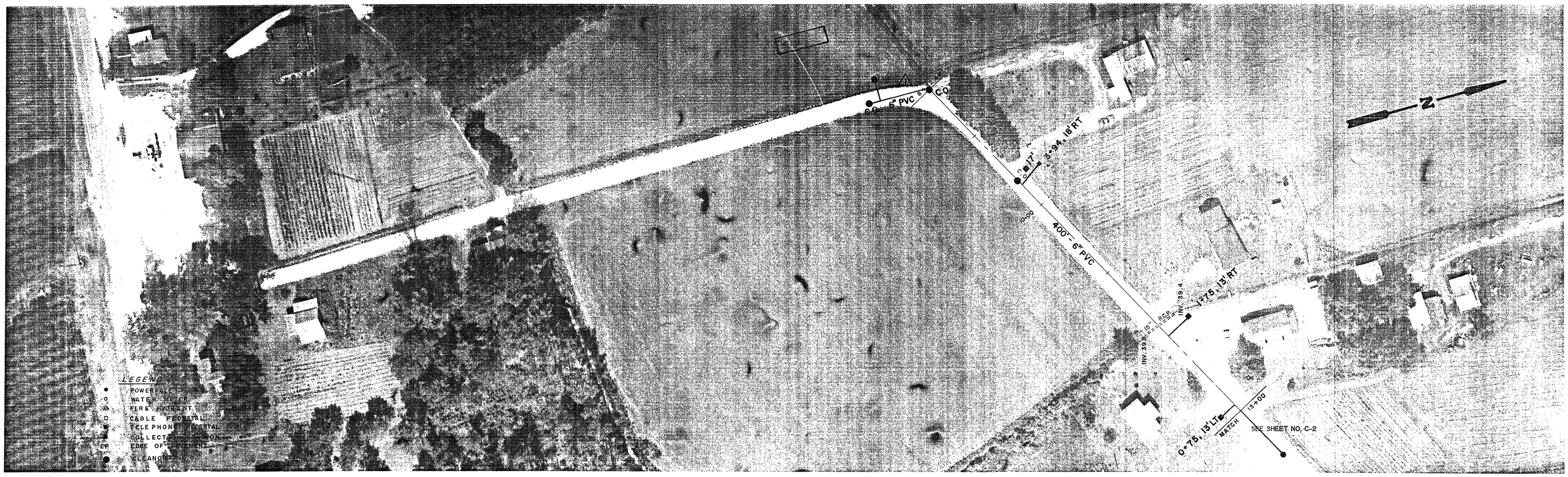
GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER B-17 | REV

25-07-057/31-S



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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
1	ADDED COLLECTION STATION			
1	ADDED ABOUT 65'-6"WWL/2-C.O.'S	RT		5/5/94

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. C-1

GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

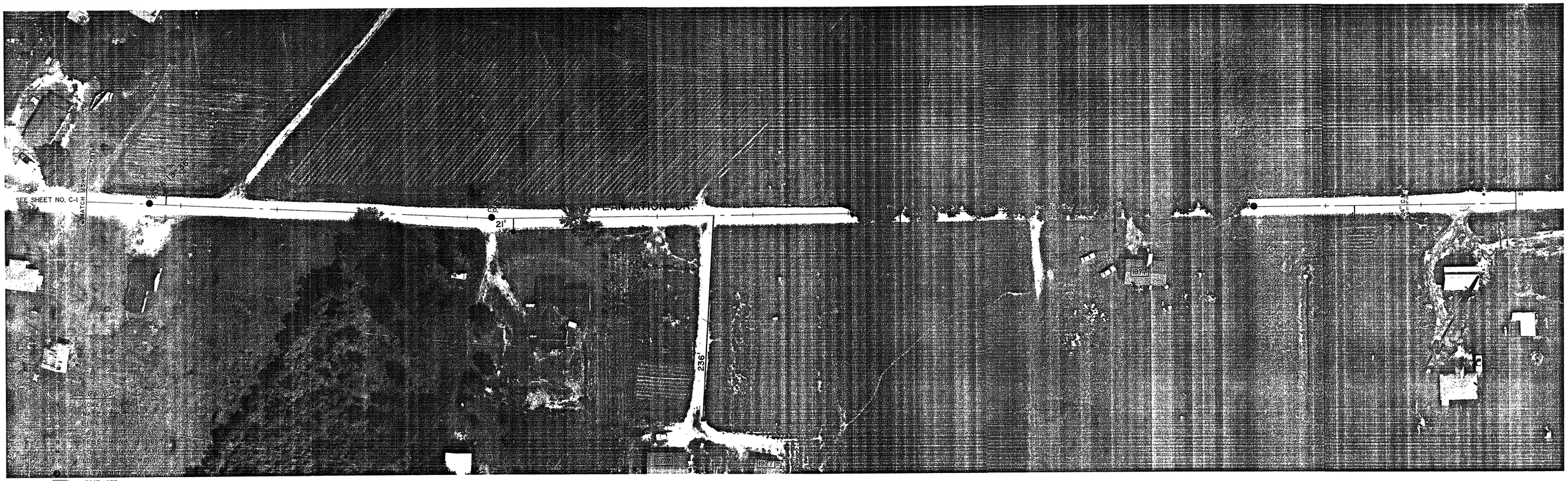
SHEET NUMBER C1 | REV

APPROVED
BY
GRAND STRAND WATER & SEWER AUTHORITY

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 4541 JOHN C. HAWKINS

25-07-057/32-s

AE 17307A



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0 50
SCALE: 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

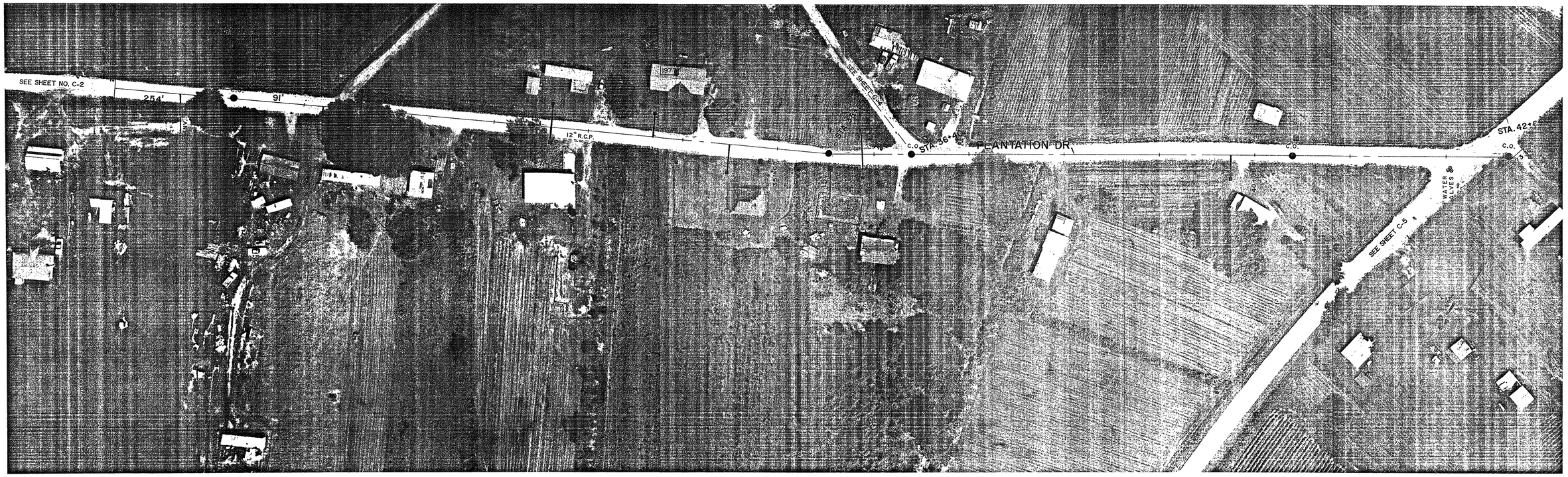
TITLE
PLAN - PROFILE SHEET NO. C-2

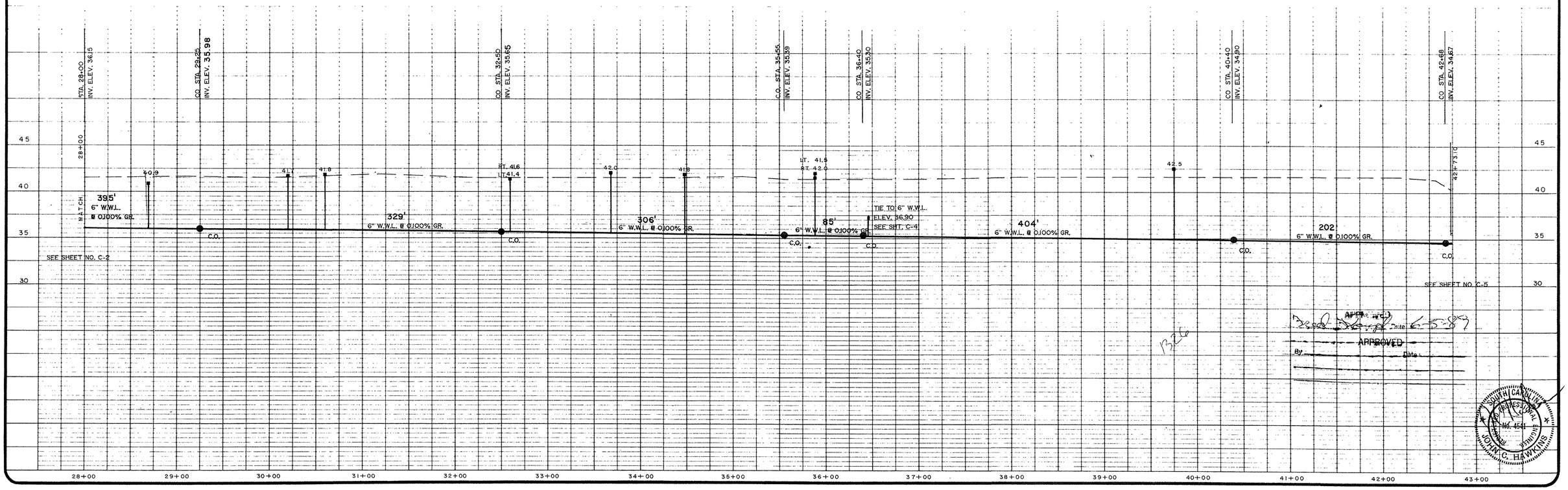
GRAND STRAND WATER & SEWER AUTHORITY

SCALE	
HORIZONTAL	1" = 50'
VERTICAL	1" = 5'
PROJECT NUMBER	
SHEET NUMBER	REV
C2	

25-07-057/33-s

AF 17307R





APPROVED
By
Date

SOUTH CAROLINA
REGISTERED
PROFESSIONAL
ENGINEER
No. 4541
JOHN C. HAWKINS

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0 50
SCALE: 1"=50'

REV	DESCRIPTION	DR	APP'D	DATE

SURVEYED AND MAPPED BY
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MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED'R RICHARDSON

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CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

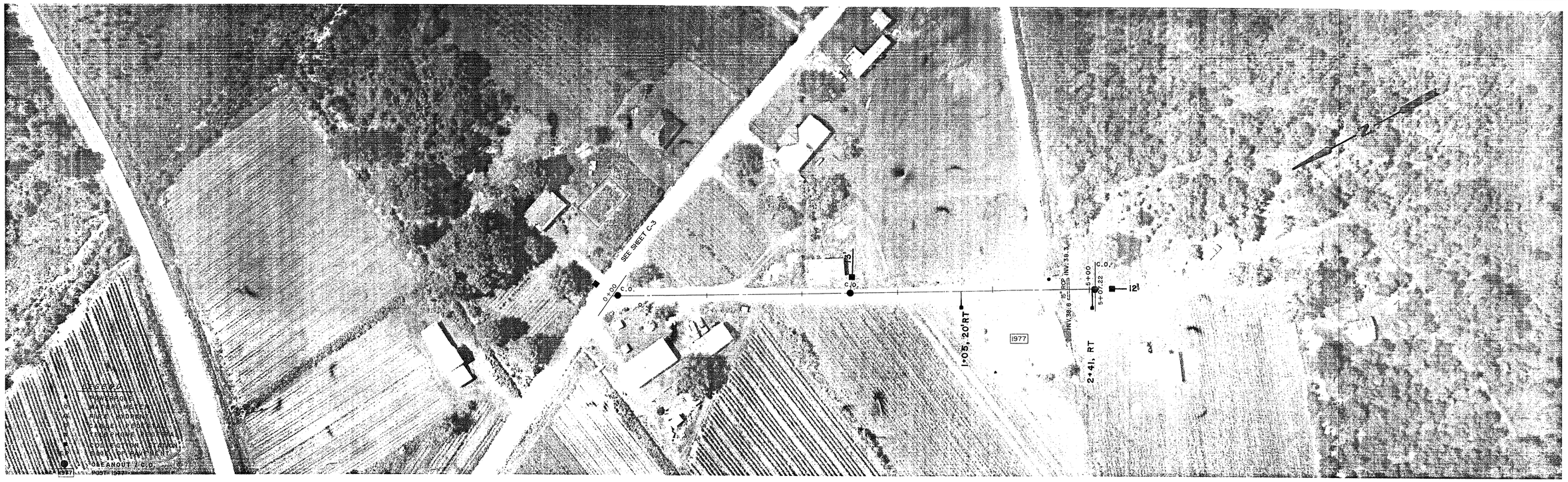
PROJECT: LONGS

TITLE: PLAN - PROFILE SHEET NO. C-3

GRAND STRAND WATER & SEWER AUTHORITY

SCALE	
HORIZONTAL	1" = 50'
VERTICAL	1" = 5'
PROJECT NUMBER	
SHEET NUMBER	C 3
REV	

25-07-057/ 34-s



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0 50
SCALE 1"=50'

REV	DESCRIPTION	DR	APP'D	DATE

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

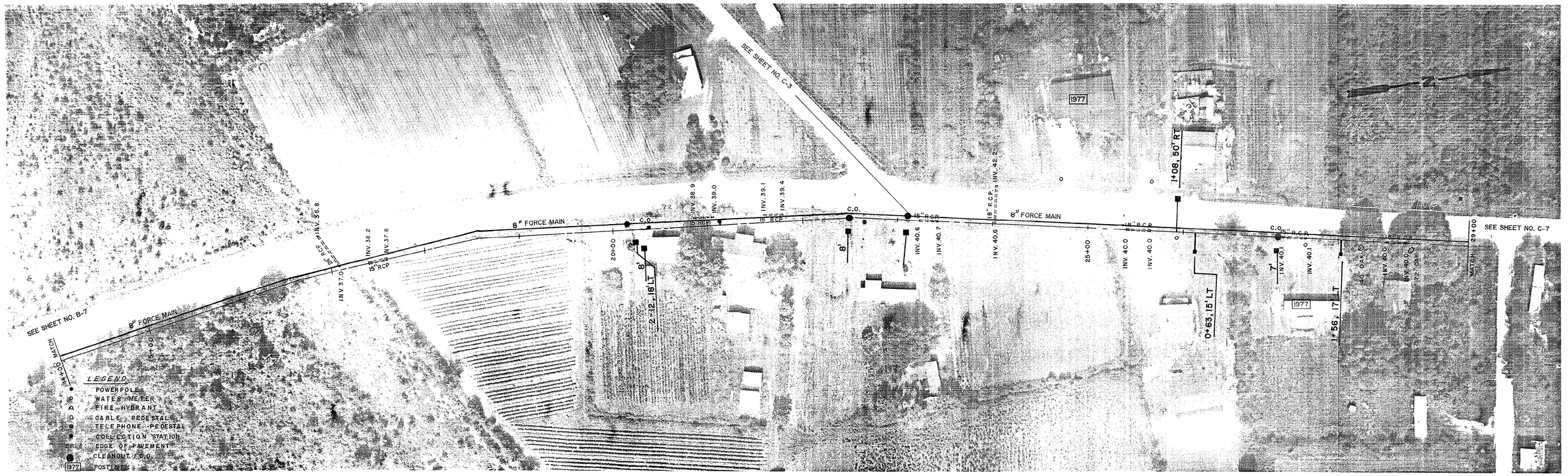
PROJECT
LONGS

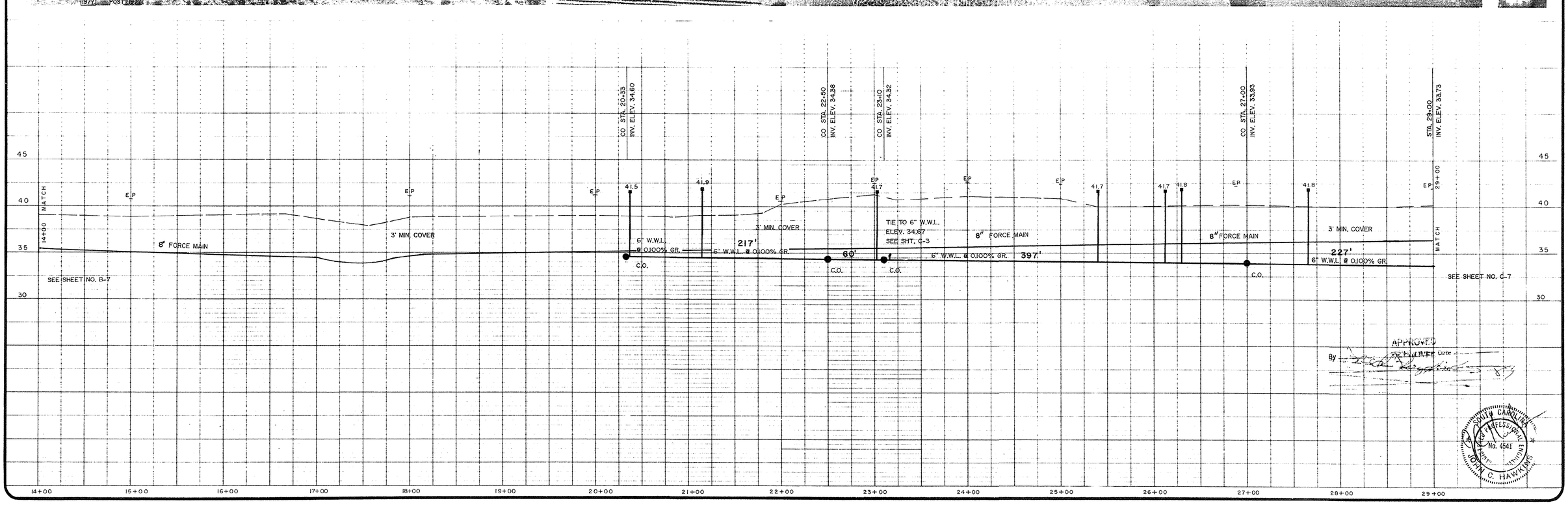
TITLE
PLAN - PROFILE
SHEET NO. C-4

GRAND STRAND WATER & SEWER AUTHORITY

SCALE	
HORIZONTAL	1"=50'
VERTICAL	1"=5'
PROJECT NUMBER	
SHEET NUMBER	REV
C 4	

25-07-057/35-s





APPROVED
By _____ Date _____

SOUTH CAROLINA
REGISTERED
PROFESSIONAL
ENGINEER
No. 4541
JOHN C. HAWKINS

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0 50
SCALE: 1" = 50'

REV.	DESCRIPTION	DR.	APP'D.	DATE
1	CHANGE F.M. TO 8"			12/13/88

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN DATE
CHECKED DATE
APPROVED AUG. 1986 DATE
OWNER'S APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

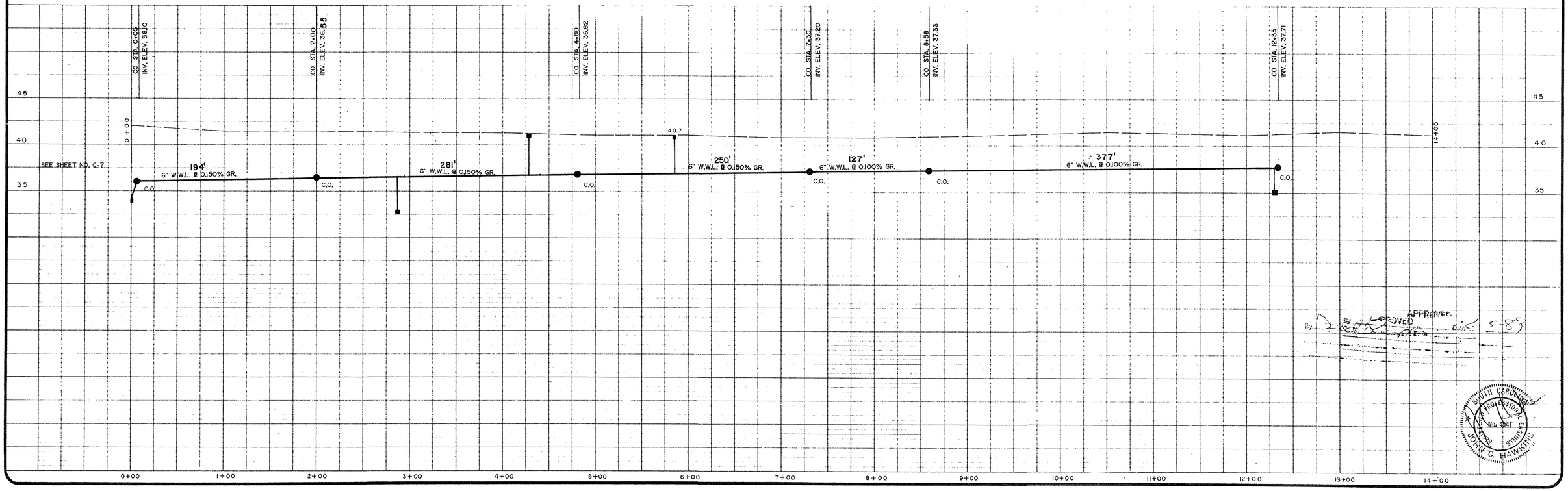
TITLE
PLAN - PROFILE
SHEET NO. C-5

GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'
PROJECT NUMBER
SHEET NUMBER C 5
REV

25-07-057/36-s





APPROVED
BY _____ DATE 5-15-87

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 4941
JOHN C. HAWKINS

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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN DATE
CHECKED DATE
APPROVED AUG. 1986 DATE
OWNER'S APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P O BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. C-6

GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER C6

REV

25-07-057/37-8

MATCHLINE THIS SHEET 3+00

SEE SHT. NO. C-5

MATCH

STA. 29+00 INV. ELEV. 33.73

C.O. STA. 29+31 INV. ELEV. 33.70

STA. 31+54 INV. ELEV. 33.47

C.O. STA. 0+25 INV. ELEV. 34.0

C.O. STA. 1+35 INV. ELEV. 34.5

C.O. STA. 2+75 INV. ELEV. 36.2

C.O. STA. 4+63 INV. EL. 37.5

C.O. STA. 5+80 INV. ELEV. 38.7

STA. 42+00 INV. ELEV. 32.37

MATCH

SEE SHEET NO. C-12

8" FORCE MAIN

TO P/S

EXIST. 8" W.L.

1977

PUMP STATION NO. 2
SEE SHT. NO. P.S.-2

SEE SHEET C-8

2" W.W.L.

2:06'

2:95', 58' LT

2:16'

0+76', 48' LT

0+65', 23' RT

1+85', 18' RT

MAIL BOXES

SEE SHEET NO. C-12

LEGEND

- POWER POLE
- WATER METER
- FIRE HYDRANT
- CABLE PEDESTAL
- TELEPHONE PEDESTAL
- COLLECTION STATION
- EP EDGE OF PAVEMENT
- CLEANOUT C.O.

COLLECTOR MH FOR P/S NO. 2

C.O. STA. 34+23 INV. ELEV. 31.25

269' - 6" PVC at 0.10%

INV. IN 33.20

INV. IN 31.18

INV. OUT 31.08

3' MIN. COVER

8" FORCE MAIN

TIE TO 6" W.W.L. ELEV. 36.10 SEE SHT. C-6

231'

6" W.W.L. @ 0.100% GR.

C.O.

6" W.W.L. @ 0.100% GR.

316'

6" W.W.L. @ 0.100% GR.

TIE 6" W.W.L. EL. 32.1

251'

6" W.W.L. @ 0.265% GR.

TIE 2" W.W.L EL. 32.2

MATCHLINE 38+40 0+00

297'

6" W.W.L. @ 0.100% GR.

2" W.W.L. @ 0.9% GRADE

41.6 41.7

41.9 41.4 41.2 40.7 40.9 41.0 41.1 40.7 40.4 40.4

29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00

45 40 35 30 38 33

0+00 1+00 2+00 3+00 4+00 5+00 6+00

Revised 1-13-87

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 4541 JOHN C. HAWKINS

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0 50 SCALE: 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
3	ADDED 580 L.F. 2" W.W.L.			1/8/89
2	CHANGED F.M. TO 8"			12/3/86
	MOVE P.S. - ADJUST GRADES	JH	JCH	1-13-87

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SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. C-7

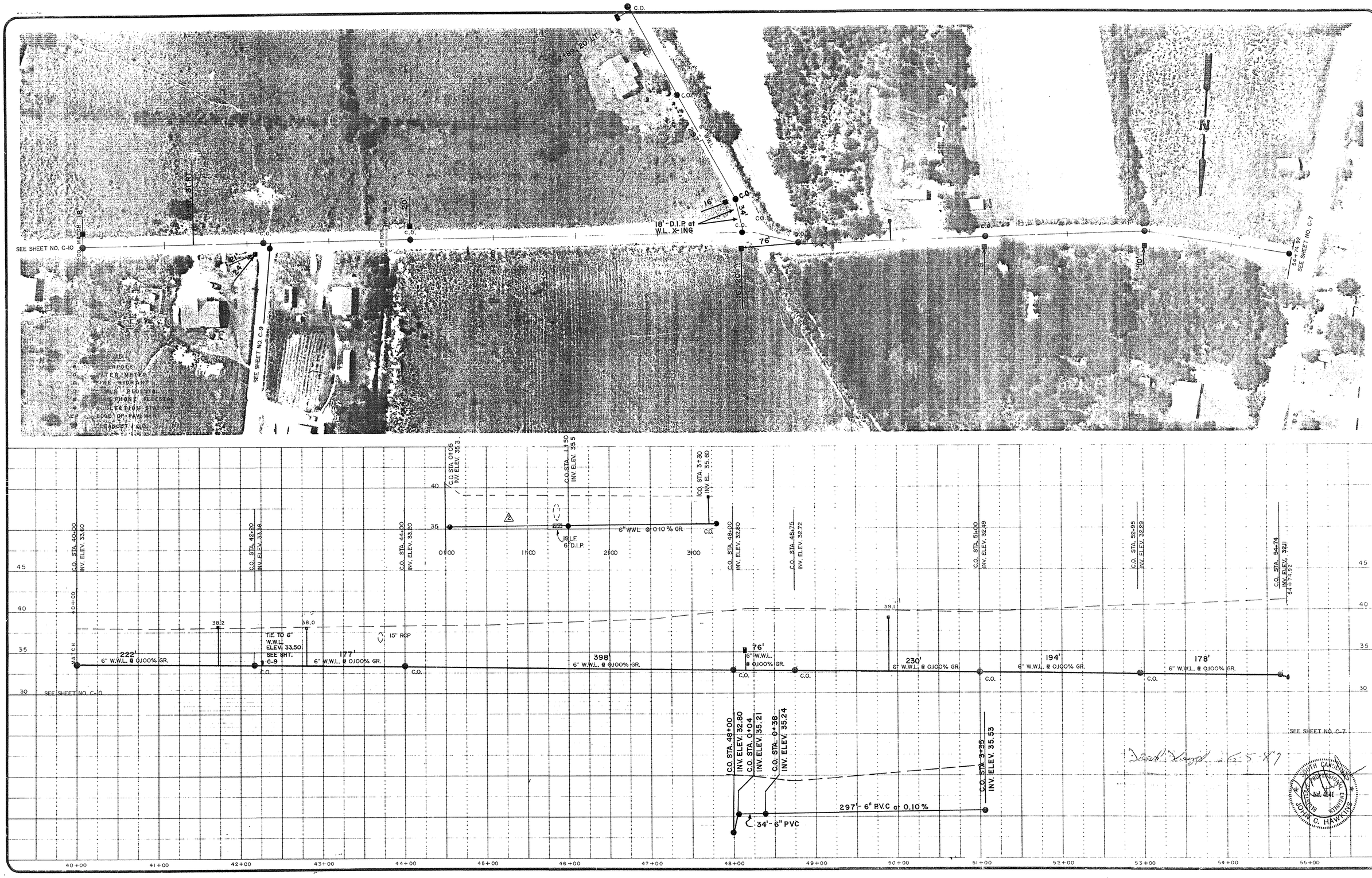
GRAND STRAND WATER & SEWER AUTHORITY

SCALE:
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER C-7 REV

25-07-057/38-s



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0 50
SCALE 1"=50'

REV	DESCRIPTION	DR	APPD	DATE
2	ADDED 330 L.F. 6" PV.C. WWL 18 L.F DIP			1/8/89
	MOVE P.S. - ADJUST GRADES	BH	DLH	1-13-87

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SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN — DATE
CHECKED — DATE
APPROVED AUG. 1986 — DATE
OWNER'S APPROVAL — DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P WENDEL
PROJECT MANAGER FRED R RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. C-8

GRAND STRAND WATER & SEWER AUTHORITY

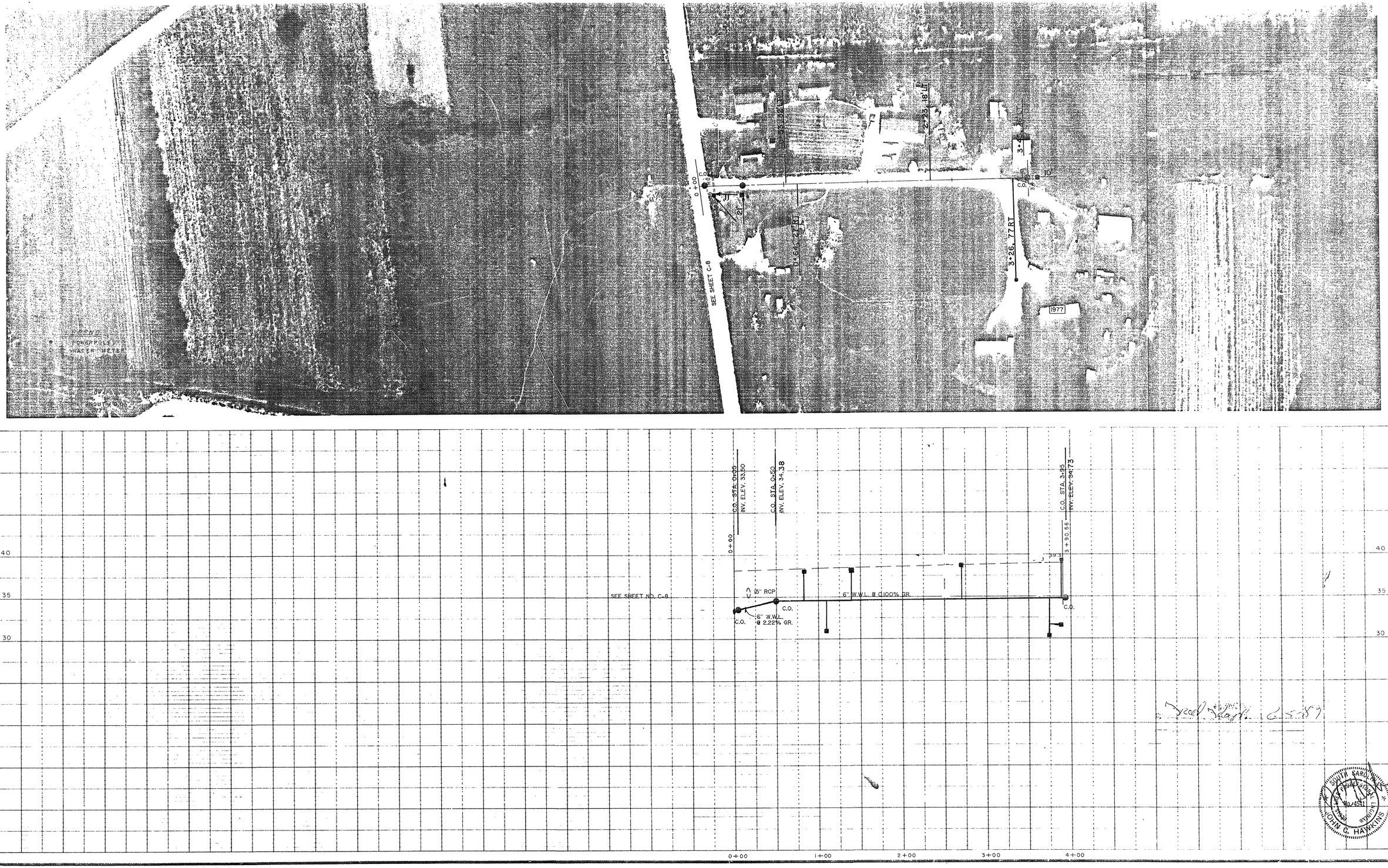
SCALE
HORIZONTAL 1"= 50'
VERTICAL 1"= 5'

PROJECT NUMBER

SHEET NUMBER C8 — REV

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 9541 JOHN C. HAWKINS

25-07-57/ 39-s



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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE

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SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

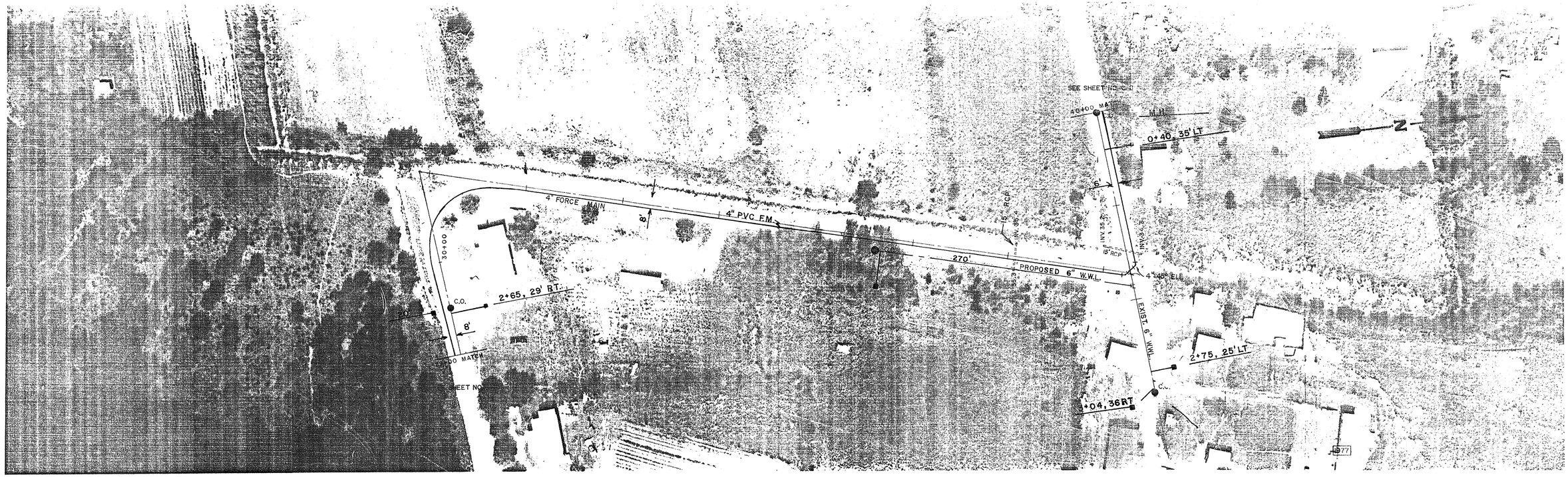
GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P WENDEL
PROJECT MANAGER FRED R RICHARDSON

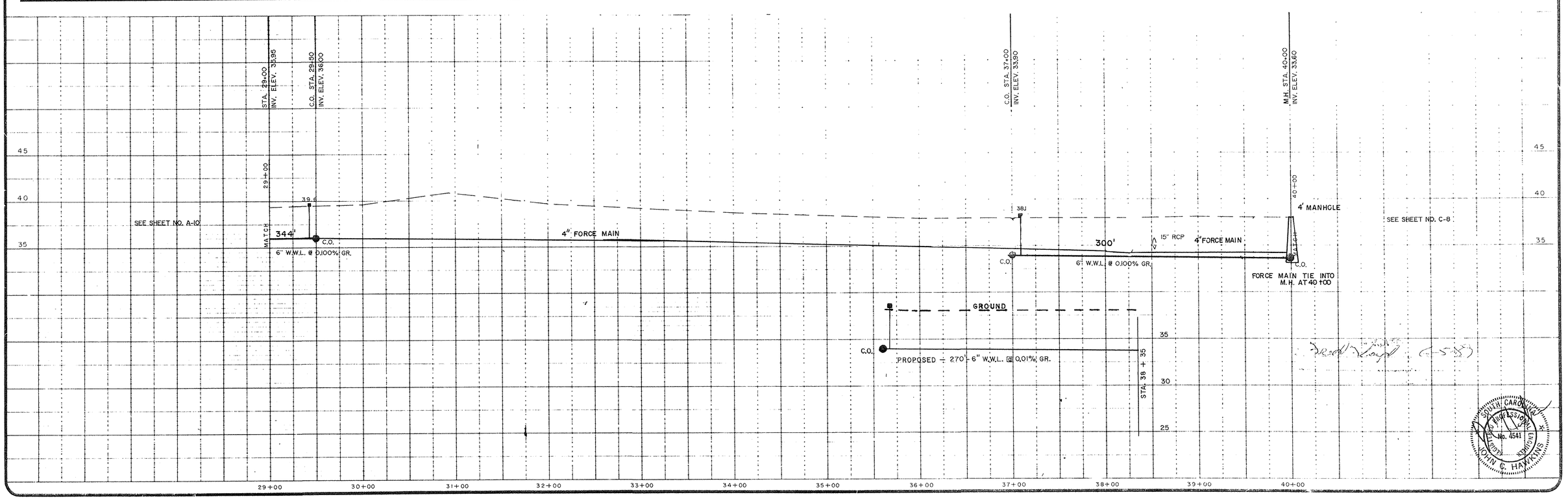
PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT
LONGS
TITLE
PLAN - PROFILE
SHEET NO. C-9

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'
PROJECT NUMBER
SHEET NUMBER C 9
REV

25-07-057/40-s





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0 50
SCALE 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
1	ADD FORCE MAIN & M.H.			12/13/88

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MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN DATE
CHECKED DATE
APPROVED AUG. 1986 DATE
OWNER'S APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
CARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. C-10

GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER C10

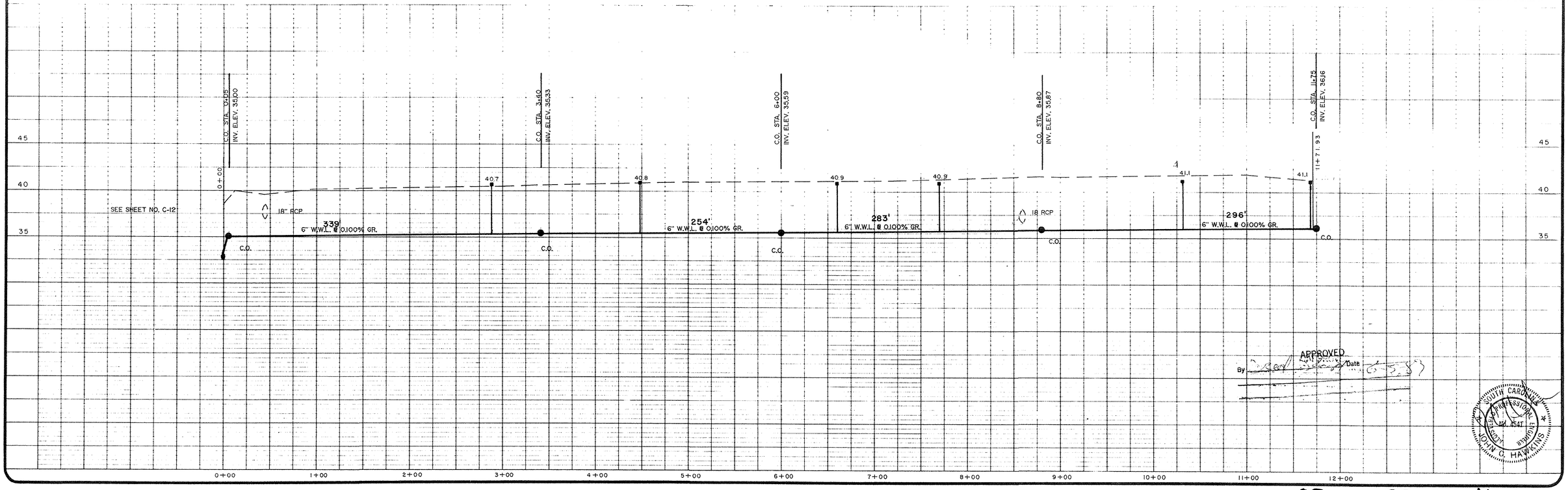
REV

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 4541 JOHN C. HAWKINS

25-07-057/41-s

AF 173078





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0 50
SCALE 1" = 50'

REV	DESCRIPTION	BY	APP'D	DATE

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SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR — DOUGLAS P. WENDEL
PROJECT MANAGER — FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT: LONGS

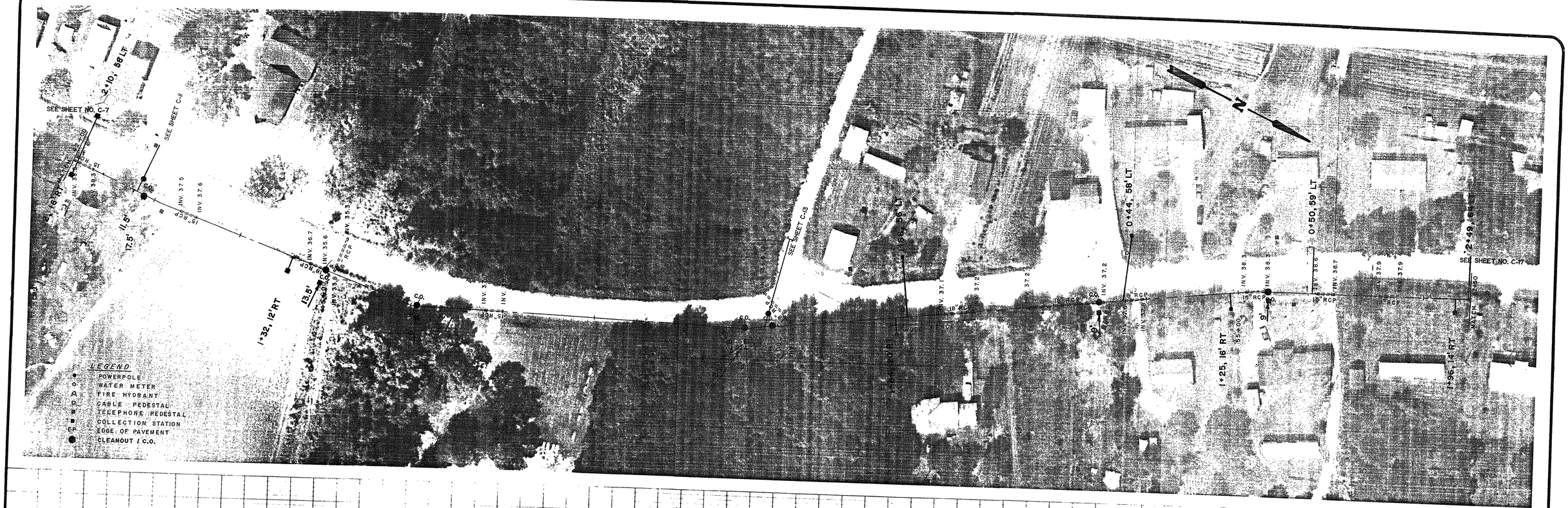
TITLE: PLAN - PROFILE SHEET NO. C-11

GRAND STRAND WATER & SEWER AUTHORITY

25-07-157/42-S

SCALE	
HORIZONTAL	1" = 50'
VERTICAL	1" = 5'
PROJECT NUMBER	
SHEET NUMBER	C11
REV.	

25-07-157/42-S



APPROVED
By: [illegible] Date: 1/5/87

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0 50
SCALE 1"=50'

REV.	DESCRIPTION	DR	APP'D	DATE

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MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P O BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P WENDEL
PROJECT MANAGER FRED R RICHARDSON

PREPARED BY
CONTINENTAL ASSOCIATES SURVEYORS

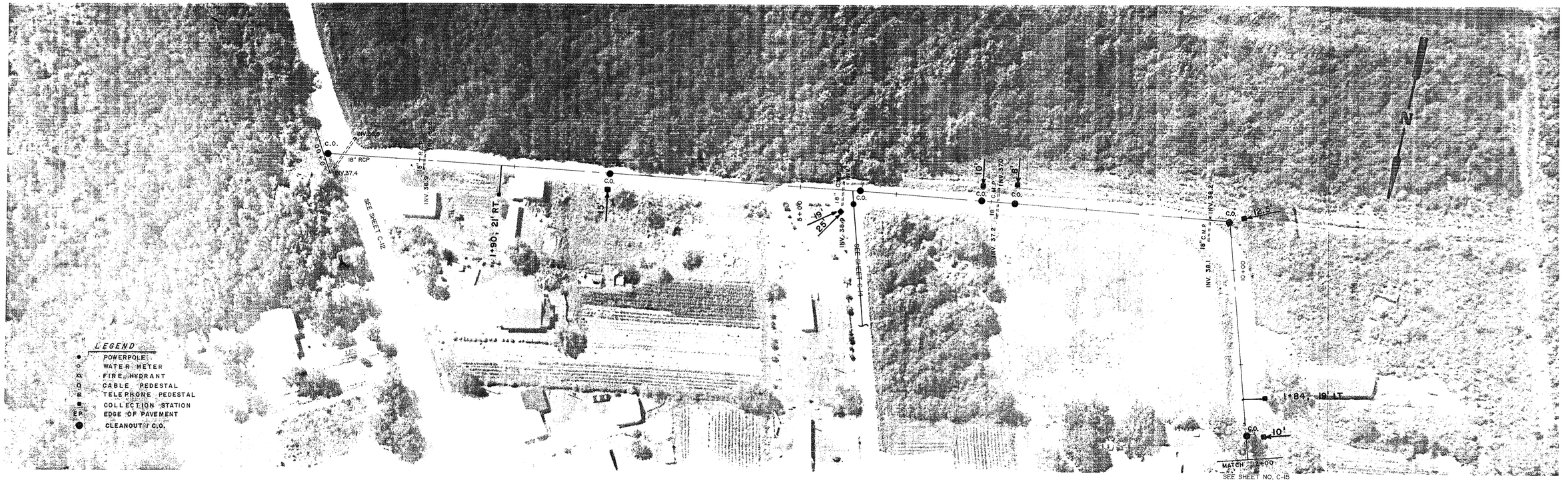
PROJECT
LONGS

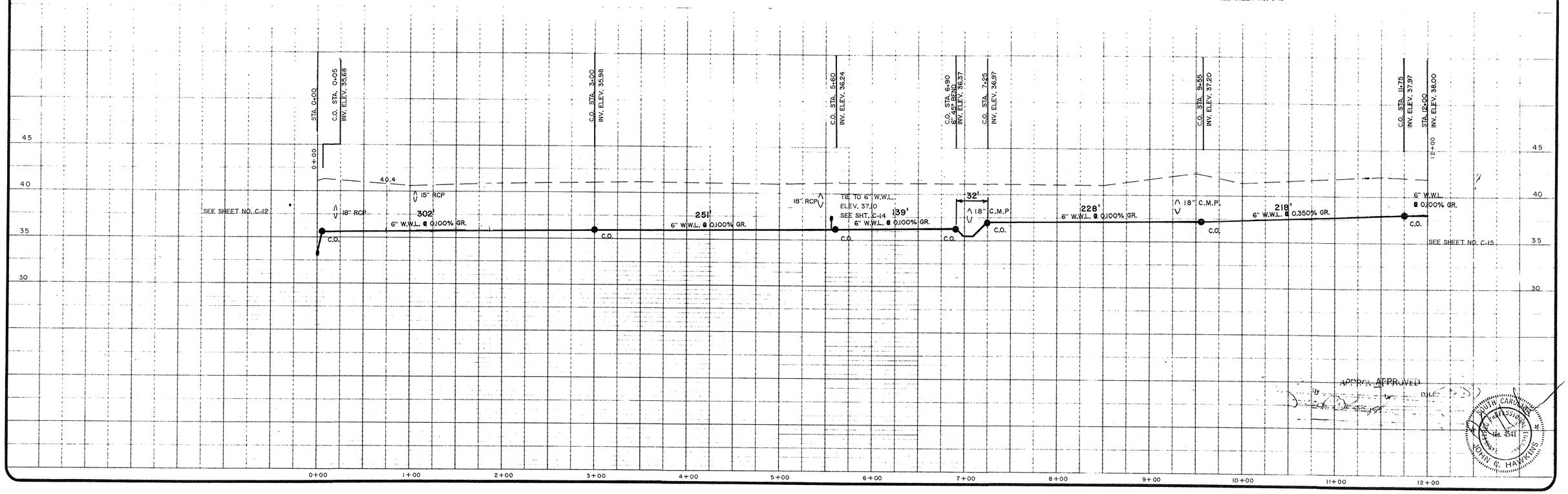
TITLE
PLAN - PROFILE
SHEET NO. 8 of 12

GRAND STRAND WATER & SEWER AUTHORITY

SCALE	
HORIZONTAL	1" = 50'
VERTICAL	1" = 5'
PROJECT NUMBER	
SHEET NUMBER	C-12

AF X 730718





APPROV. APPROVED

By ____ Dir. ____ DATE ____

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 4541 JOHN C. HAWKINS

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0 50
SCALE 1"=50'

REV	DESCRIPTION	DR	APP'D	DATE

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SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE
SHEET NO. C-13

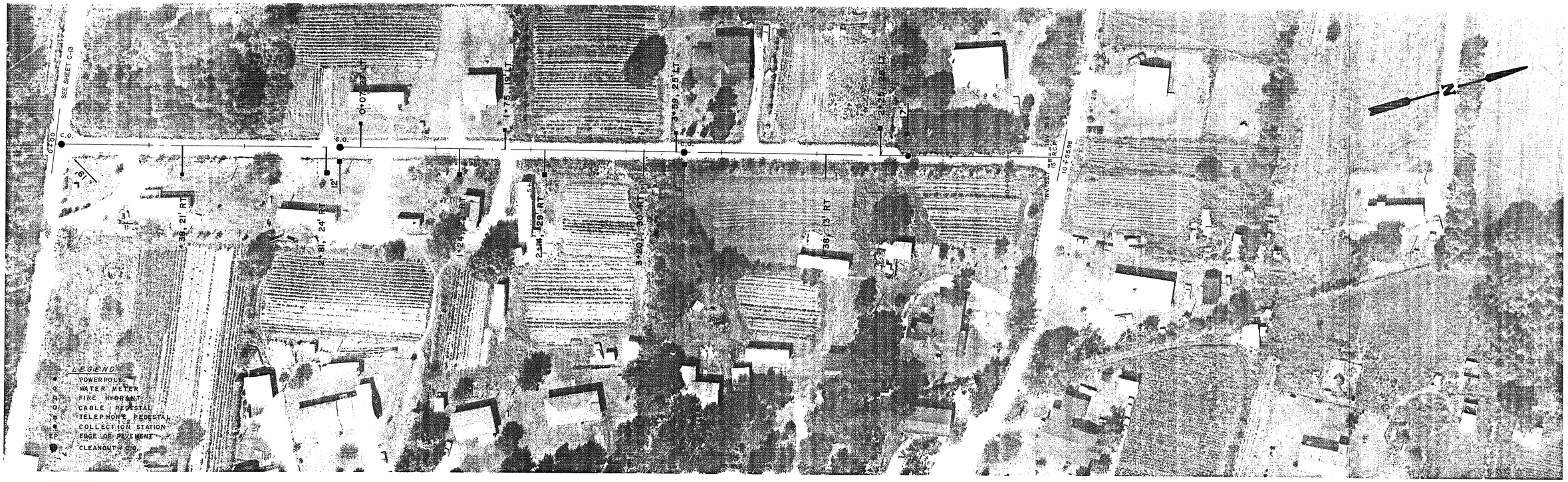
GRAND STRAND WATER & SEWER AUTHORITY

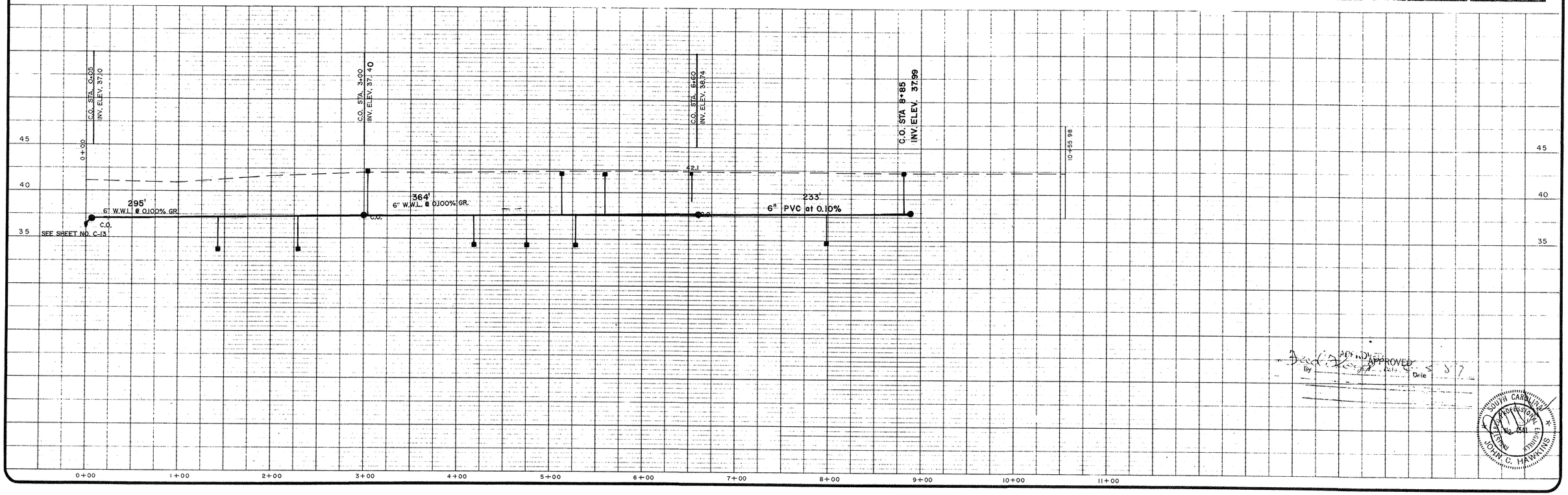
SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER C13 REV

25-07-057/44-S





APPROVED
By
Date

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PROFESSIONAL
ENGINEER
No. 4541
JOHN C. HAWKINS

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0 50
SCALE 1"=50'

REV	DESCRIPTION	DR	APP'D	DATE

SURVEYED AND MAPPED BY
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MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR — DOUGLAS P WENDEL
PROJECT MANAGER — FRED R RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

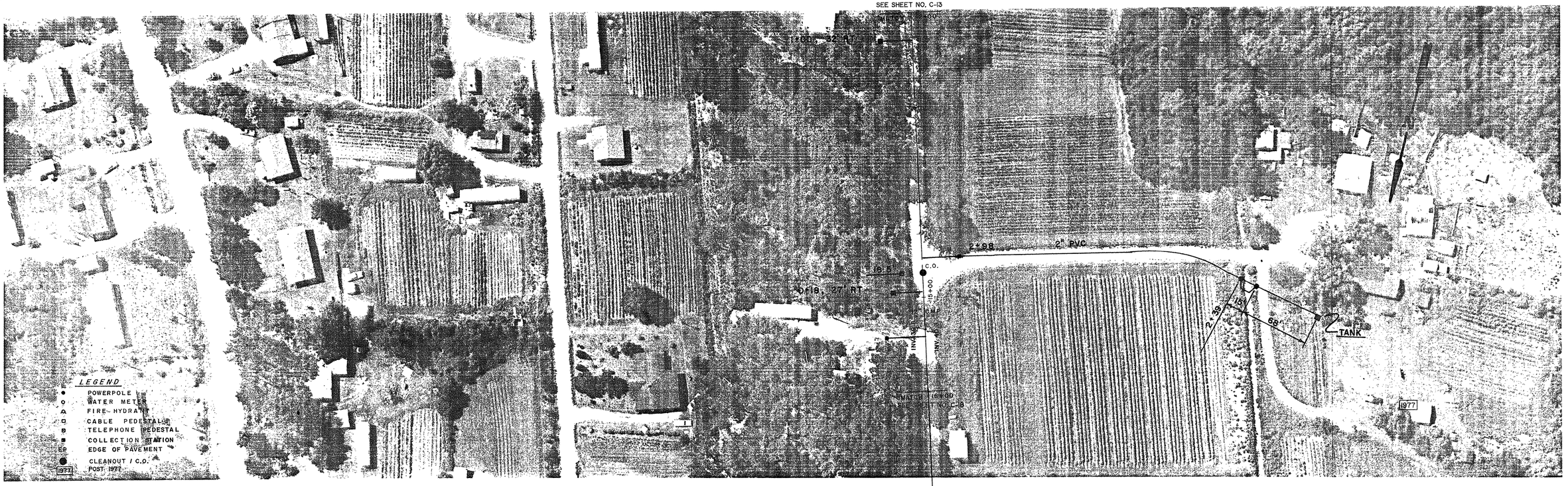
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PLAN - PROFILE SHEET NO. C-14

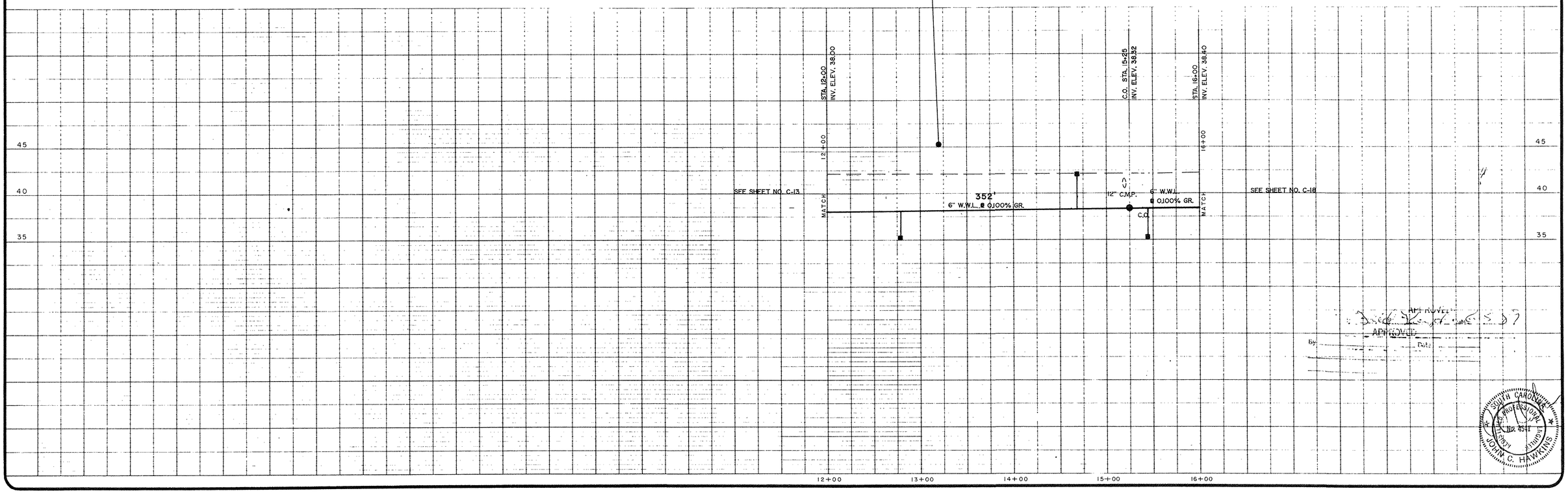
GRAND STRAND WATER & SEWER AUTHORITY

SCALE	
HORIZONTAL	1"= 50'
VERTICAL	1"= 5'
PROJECT NUMBER	
SHEET NUMBER	C14
REV.	

25-07-057/45-c

SEE SHEET NO. C-13





APPROVED

By

Date

JOHN C. HAWKINS
SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 4541

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0 50
SCALE: 1"=50'

REV	DESCRIPTION	DR	APP'D	DATE

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SOUTH CAROLINA

ENGINEERING BY
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MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE SHEET NO. C-15

GRAND STRAND WATER & SEWER AUTHORITY

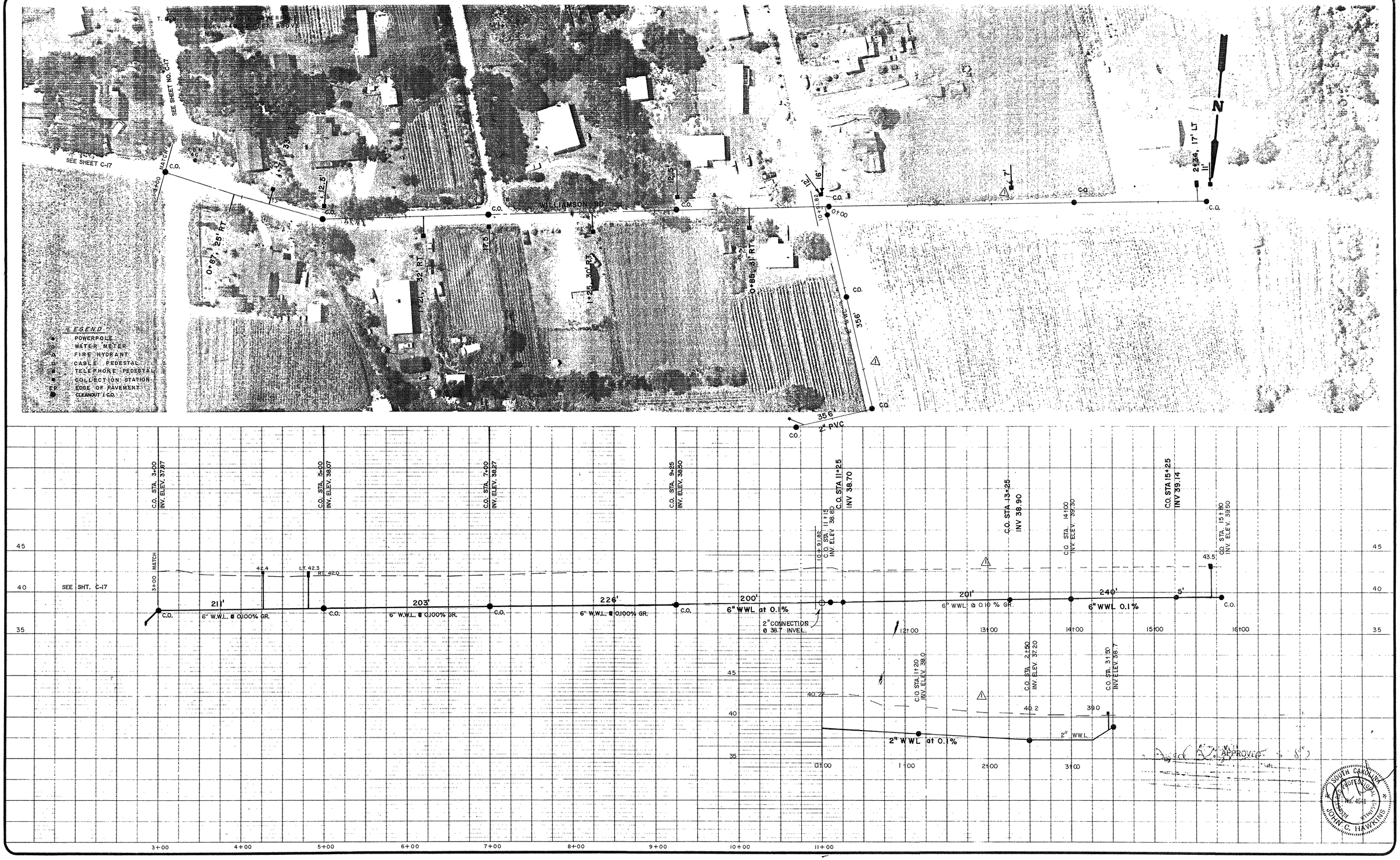
SCALE
HORIZONTAL 1"= 50'
VERTICAL 1"= 5'

PROJECT NUMBER

SHEET NUMBER C15 | REV

25-07-057/46-s

AF 97107R



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0 50
SCALE 1"=50'

REV.	DESCRIPTION	DR	APP'D	DATE
1	ADDED 655 LF 6" WWL, 350 LF 2" WWL			1/8/89

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR — DOUGLAS P. WENDEL
PROJECT MANAGER — FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT: LONGS

TITLE: PLAN - PROFILE SHEET NO. C-16

GRAND STRAND WATER & SEWER AUTHORITY

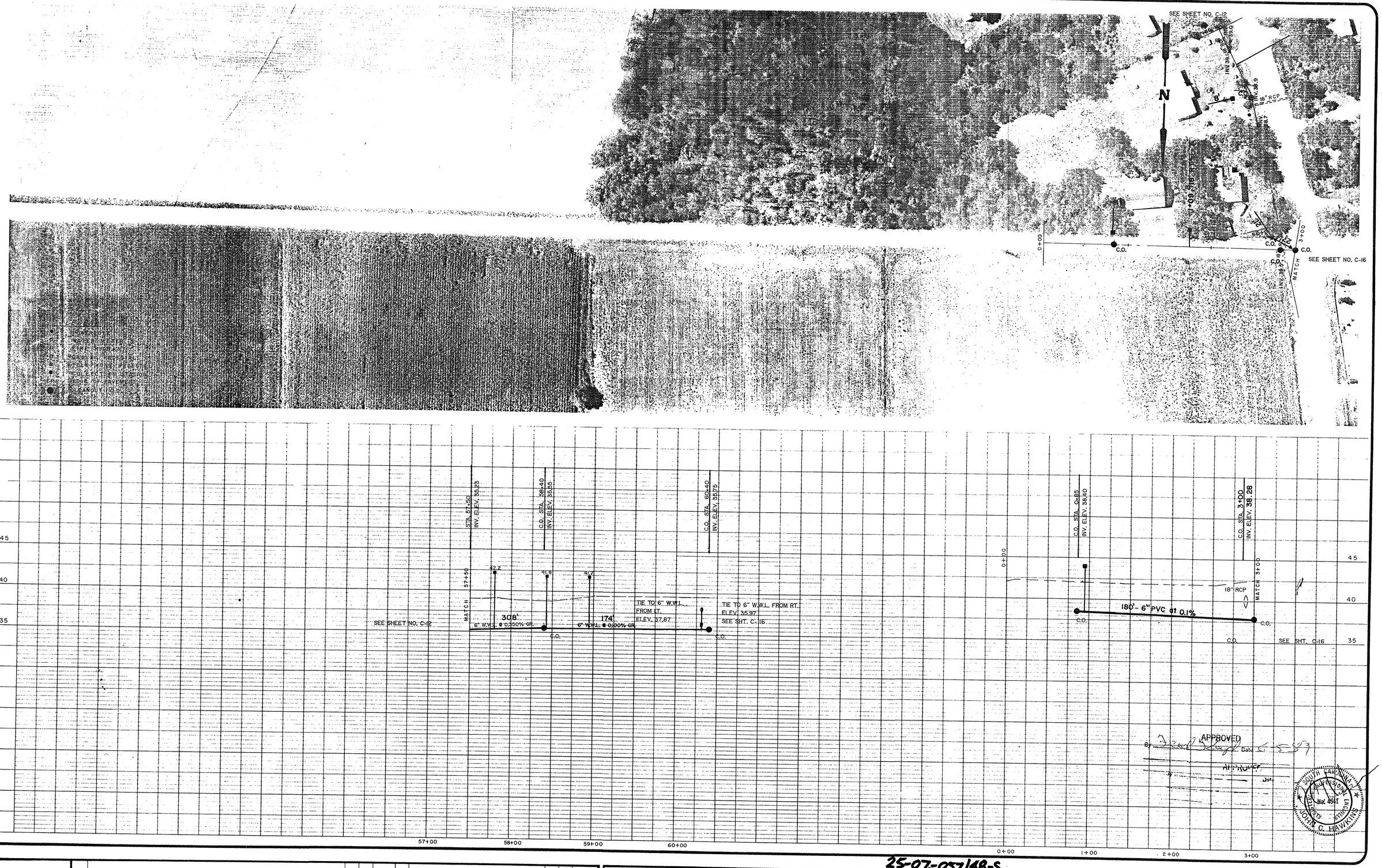
SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

PROJECT NUMBER

SHEET NUMBER: C16

REV

25-07-057/47-s



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0 50
SCALE 1" = 50'

REV.	DESCRIPTION	BY	APP'D	DATE

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
AUG. 1986	
OWNER'S APPROVAL	DATE

25-07-057/48-S

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
PLAN - PROFILE SHEET NO. C-17

GRAND STRAND WATER & SEWER AUTHORITY

SCALE
HORIZONTAL 1" = 50'
VERTICAL 1" = 5'

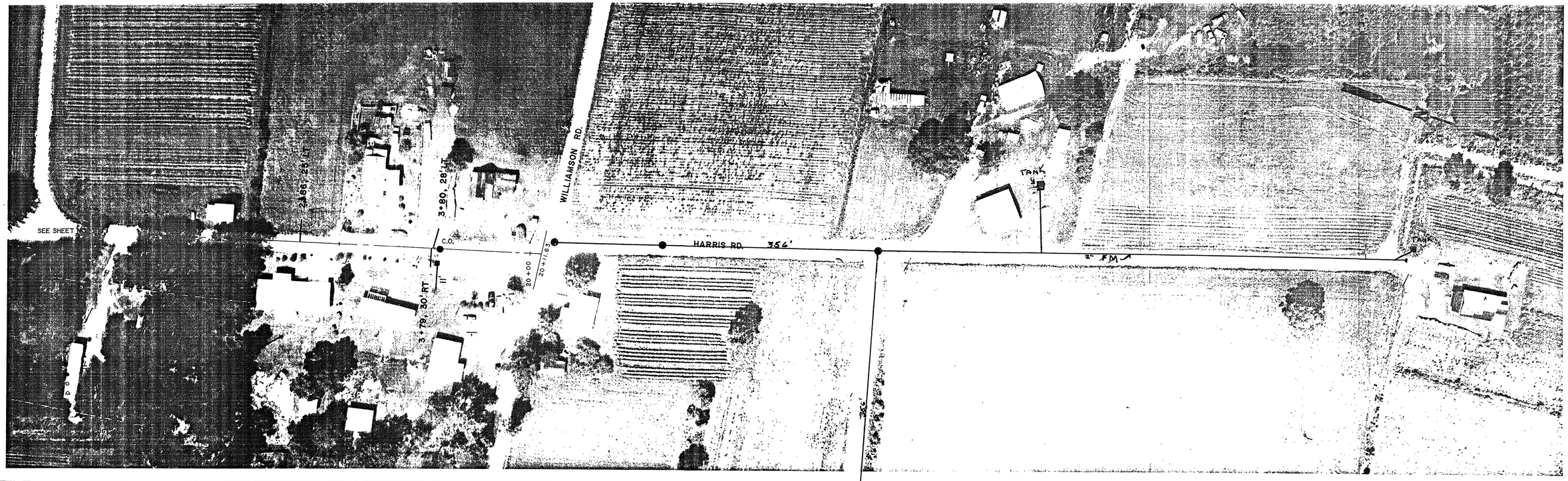
PROJECT NUMBER

SHEET NUMBER C17

REV.

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 4541 JOHN C. HAWKINS

AF 37307B



APPROVED
By _____ Date 6-5-87

JOHN W. C. HAWKINS
REGISTERED PROFESSIONAL ENGINEER
No. 4551
SOUTH CAROLINA

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0 50
SCALE: 1" = 50'

REV.	DESCRIPTION	DR	APP'D	DATE

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	
DRAWN	DATE
CHECKED	DATE
APPROVED AUG. 1986	DATE
OWNER'S APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AER.AL SURVEYS, INC.
BARTOW, FLORIDA

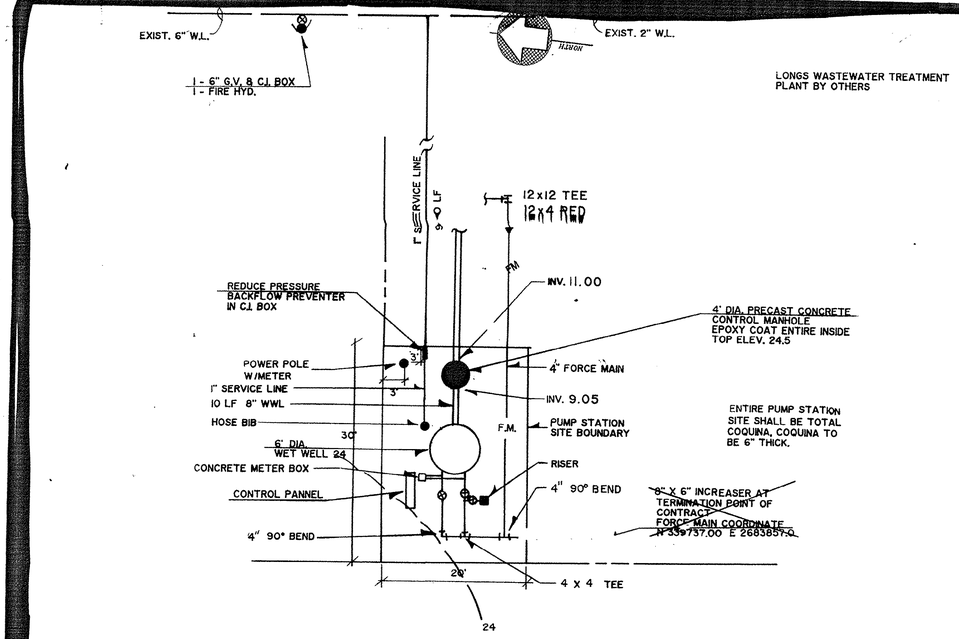
PROJECT: LONGS

TITLE: PLAN - PROFILE SHEET NO. C-18

GRAND STRAND WATER & SEWER AUTHORITY

SCALE HORIZONTAL	1" = 50'
VERTICAL	1" = 5'
PROJECT NUMBER	
SHEET NUMBER	C18
REV	

25-07-057/49-s



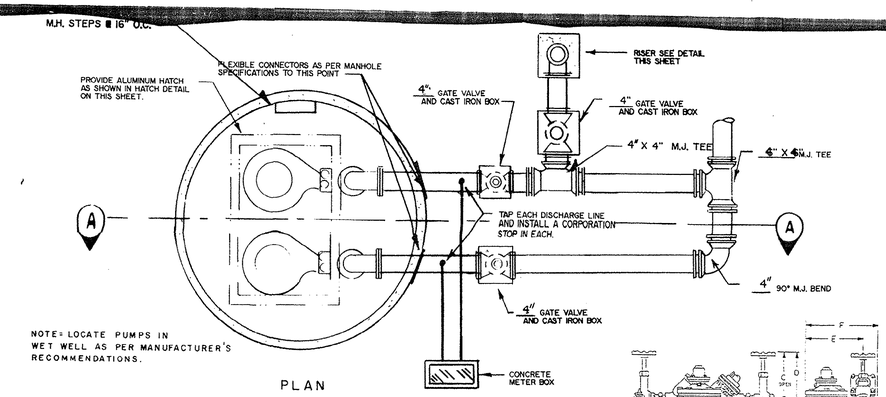
NOTES :

TOTAL SITE TO BE COVERED WITH 6" OF #57 STONE OVER FILTER FABRIC.

ACCESS ROAD TO BE 6" COQUINA

PUMP STATION NO. 1
SITE PLAN
SCALE: 1" = 10'

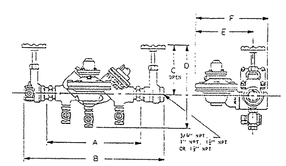
PUMP STATION SITE
SEE SHEET B-17



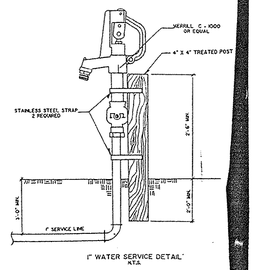
NOTE: LOCATE PUMPS IN WET WELL AS PER MANUFACTURER'S RECOMMENDATIONS.

PLAN
PUMPING STATION
NOT TO SCALE

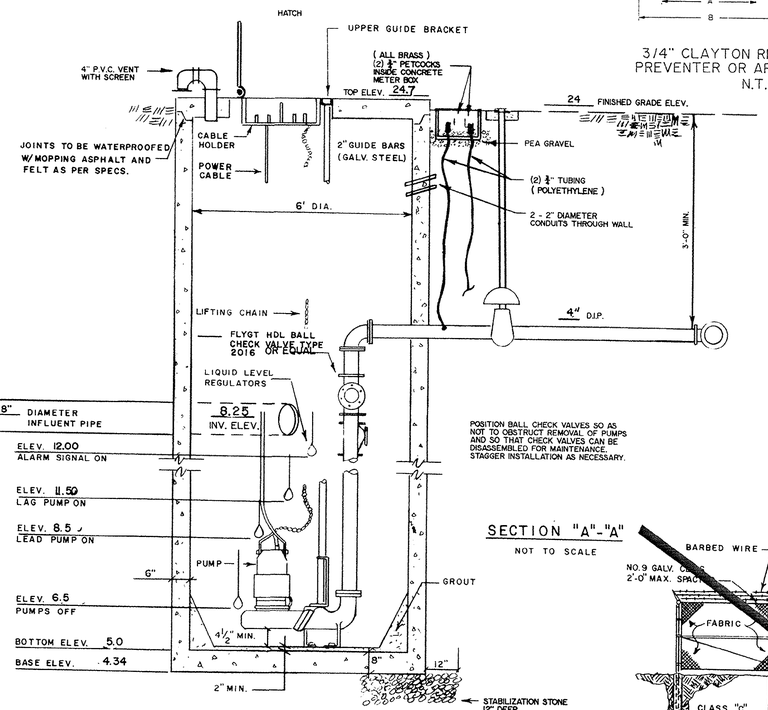
PUMP DATA	
MODEL	FLYGT 3102 OR EQUAL
H. P.	5.0.
VOLTS	230
R.P.M.	1750
IMPELLER	433
PHASE OF POWER	3 ϕ
PUMP DISCHARGE SIZE	4"



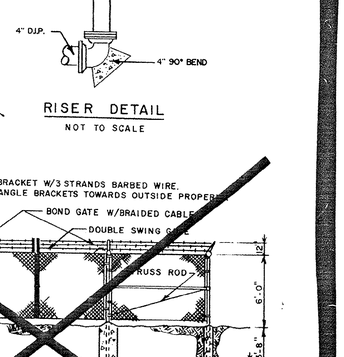
3/4" CLAYTON RP-2 BACKFLOW PREVENTER OR APPROVED EQUAL
N.T.S.



1" WATER SERVICE DETAIL
N.T.S.



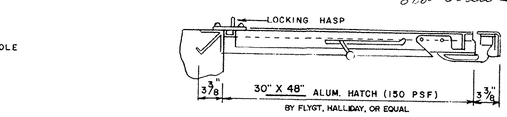
POSITION BALL CHECK VALVES SO AS NOT TO OBSTRUCT REMOVAL OF PUMPS AND SO THAT CHECK VALVES CAN BE DISASSEMBLED FOR MAINTENANCE. STAGGER INSTALLATION AS NECESSARY.



THREADED CONNECTION AS REQUIRED BY GRAND STRAND WATER AND SEWER AUTHORITY

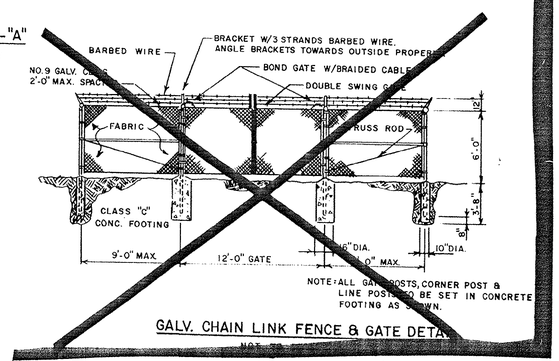
RISER DETAIL
NOT TO SCALE

SECTION "A"-"A"
NOT TO SCALE



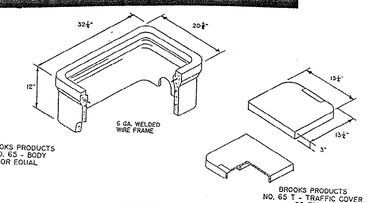
HATCH DETAIL
NOT TO SCALE

NOTE :
EMERGENCY PLATE TO BE PROVIDED AND INSTALLED BY G.S.W. & S.A.

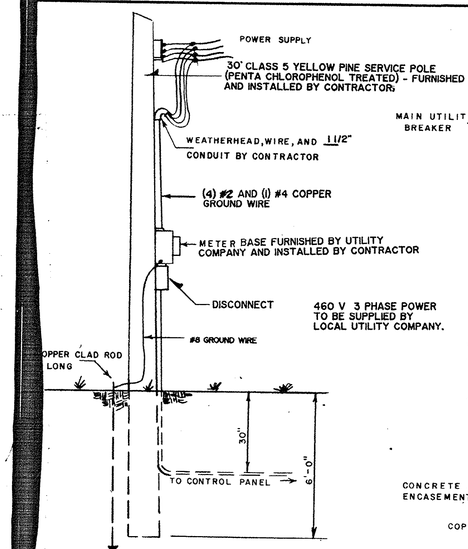


NOTE: ALL GATE POSTS, CORNER POST & LINE POSTS TO BE SET IN CONCRETE FOOTING AS SHOWN.

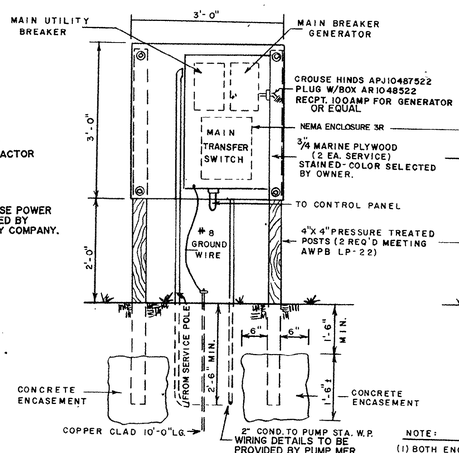
GALV. CHAIN LINK FENCE & GATE DETAIL
NOT TO SCALE



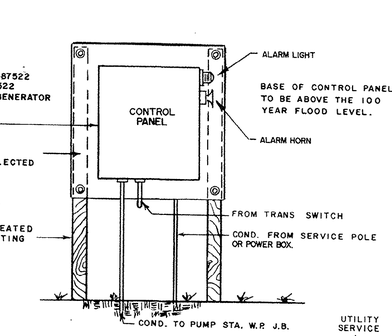
CONCRETE METER BOX AND COVER
N.T.S.



SERVICE POLE DETAIL
NOT TO SCALE

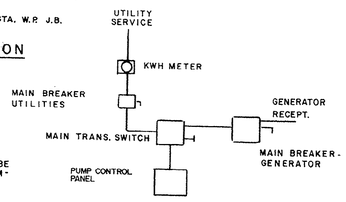


REAR ELEVATION



FRONT ELEVATION

NOTE:
(1) BOTH ENCLOSURES TO BE FURNISHED W/PADLOCKS.
(2) CAST IRON, WATERPROOF JUNCTION BOX TO BE INSTALLED IN W.W. NEAR THE TOP FOR TERMINATION OF ALL SUBMERSIBLE CABLES.



WIRING SCHEMATIC

ELECTRICAL SERVICE DETAIL

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NO.	REVISION	BY	DATE
3	REVISE PS. PIPING SIZE & LOCATION & PUMPS LOWER PS. ADD METER BOX DETAIL, SHOW PETCOCK & TUBING TYPE	BHM	12/13/88 12-11-87
1	REV P.S. SHT # 1 AND 2		11-17-87

SURVEYED BY
MURRELLS INLET
SUR-TECH, INC
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	FRED AKEL
DRAWN	SUSAN YOUNT DATE
CHECKED	FRED AKEL DATE
APPROVED	DATE
OWNERS APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P. O. BOX 261, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUG. AS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT: LONGS

TITLE: PUMP STATION NO. 1

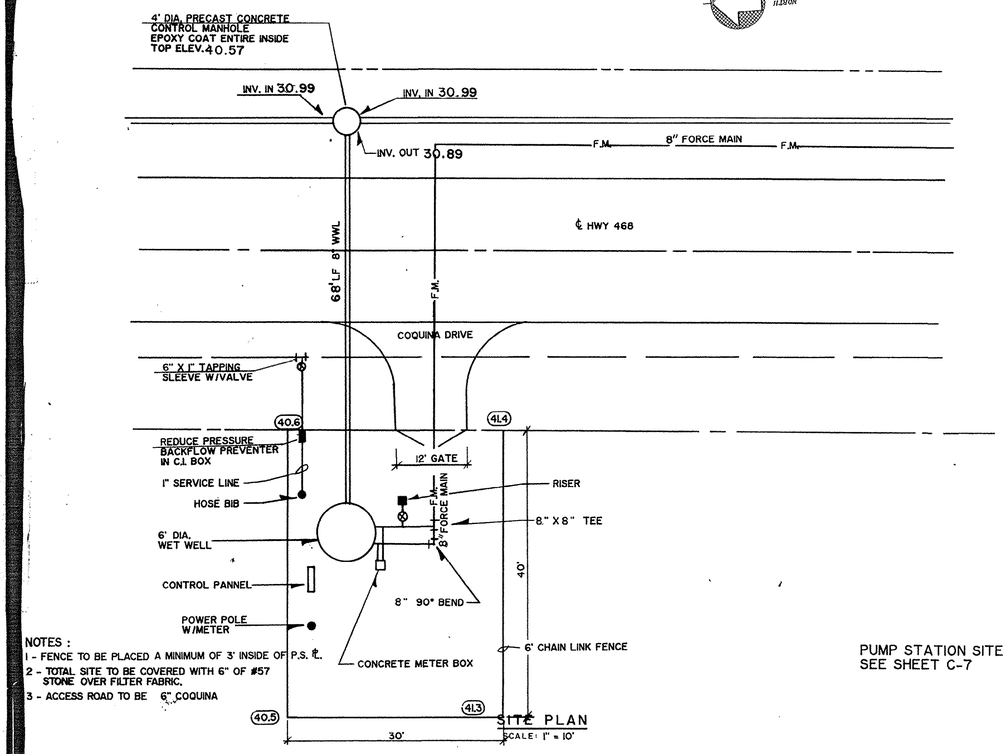
GRAND STRAND WATER & SEWER AUTHORITY

NOTED

JOB NUMBER: 198647

SHEET NUMBER: P.S. 1

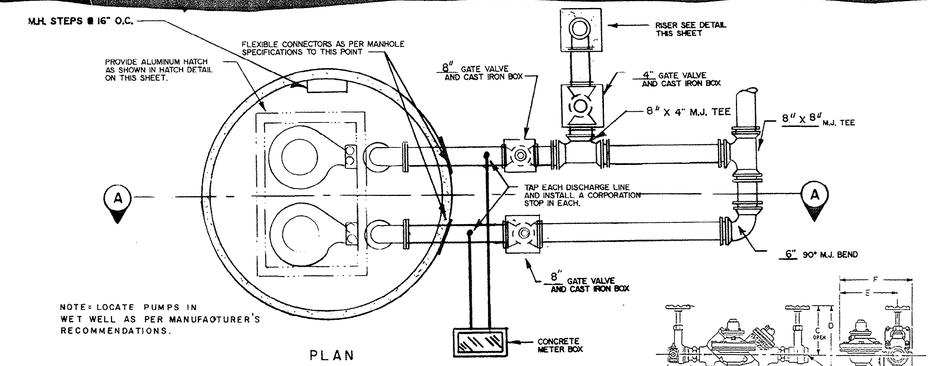
REV



NOTES :
1 - FENCE TO BE PLACED A MINIMUM OF 3' INSIDE OF P.S. ℄.
2 - TOTAL SITE TO BE COVERED WITH 6" OF #57 STONE OVER FILTER FABRIC.
3 - ACCESS ROAD TO BE 6" COQUINA

PUMP STATION SITE
SEE SHEET C-7

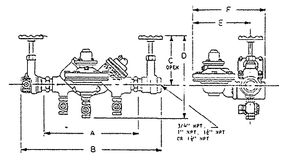
SITE PLAN



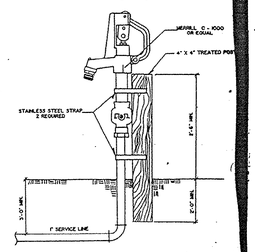
NOTE= LOCATE PUMPS IN WET WELL AS PER MANUFACTURER'S RECOMMENDATIONS.

PLAN
PUMPING STATION
NOT TO SCALE

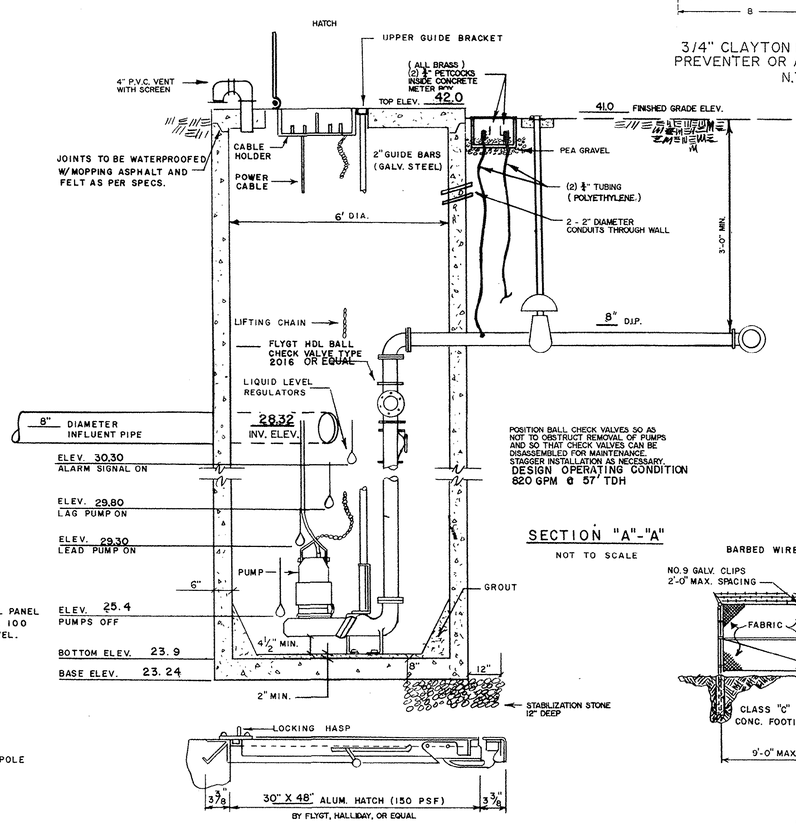
PUMP DATA	
MODEL	FLYGT 3152 OR EQUAL
H. P.	20
VOLTS	460
R.P.M.	1750
IMPELLER	432
PHASE OF POWER	3 ℗
PUMP DISCHARGE SIZE	8"



3/4" CLAYTON RP-2 BACKFLOW PREVENTER OR APPROVED EQUAL
N.T.S.



1" WATER SERVICE DETAIL
N.T.S.



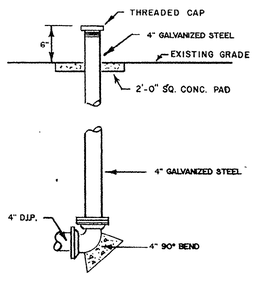
POSITION BALL CHECK VALVES SO AS NOT TO OBSTRUCT REMOVAL OF PUMPS AND SO THAT CHECK VALVES CAN BE DISASSEMBLED FOR MAINTENANCE. STAGGER INSTALLATION AS NECESSARY.
DESIGN OPERATING CONDITION
820 GPM @ 57' TDH

SECTION "A"-"A"
NOT TO SCALE

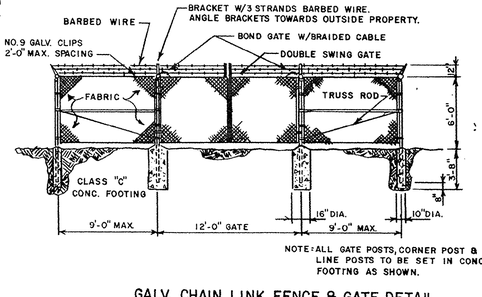
BY FLYGT, HALLIDAY, OR EQUAL

HATCH DETAIL
NOT TO SCALE

THREADED CONNECTION AS REQUIRED BY GRAND STRAND WATER AND SEWER AUTHORITY

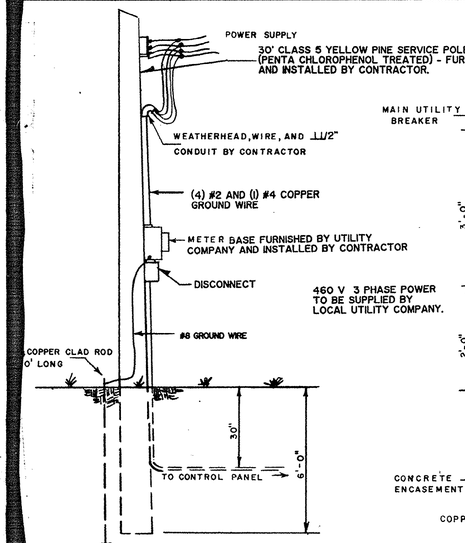


RISER DETAIL
NOT TO SCALE

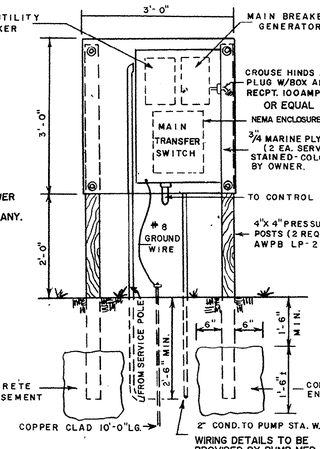


NOTE: ALL GATE POSTS, CORNER POST & LINE POSTS TO BE SET IN CONCRETE FOOTING AS SHOWN.

GALV. CHAIN LINK FENCE & GATE DETAIL

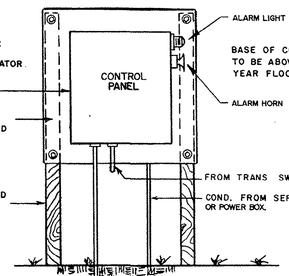


SERVICE POLE DETAIL
NOT TO SCALE



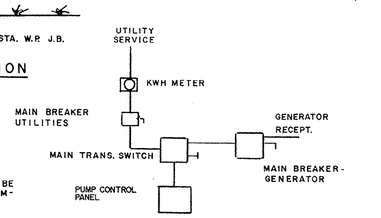
WIRING DETAILS TO BE PROVIDED BY PUMP MFR.

REAR ELEVATION



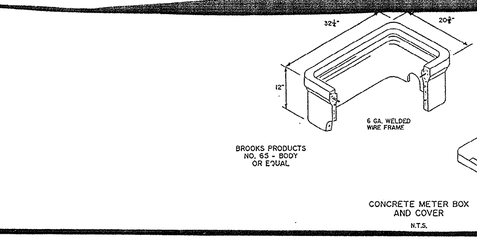
FRONT ELEVATION

NOTE:
(1) BOTH ENCLOSURES TO BE FURNISHED W/PADLOCKS.
(2) CAST IRON, WATERPROOF JUNCTION BOX TO BE INSTALLED IN W.W. NEAR THE TOP FOR TERMINATION OF ALL SUBMERSIBLE CABLES.



WIRING SCHEMATIC

NOTE :
EMERGENCY PLATE TO BE PROVIDED AND INSTALLED BY G.S.W. & S.A.



CONCRETE METER BOX AND COVER
N.T.S.

ELECTRICAL SERVICE DETAIL

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REV.	DESCRIPTION	BY	APP'D	DATE
2	LOWER P.S. UPSIZE PUMP & PIPING			12/13/88
	ADD METER BOX DETAIL, SHOW PETCOCK & TUBING TYPE	BH		12-21-87
1	Rev. P.S. SHT 2 INFO			11-17-87

SURVEYED AND MAPPED BY
SUR-TECH, INC
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	FRED AKEL
DRAWN	SUSAN YOUNT DATE
CHECKED	FRED AKEL DATE
APPROVED	DATE
OWNERS APPROVAL	DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR — DOUGLAS P. WENDEL
PROJECT MANAGER — FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT: LONGS

TITLE: PUMP STATION NO. 2

GRAND STRAND WATER & SEWER AUTHORITY

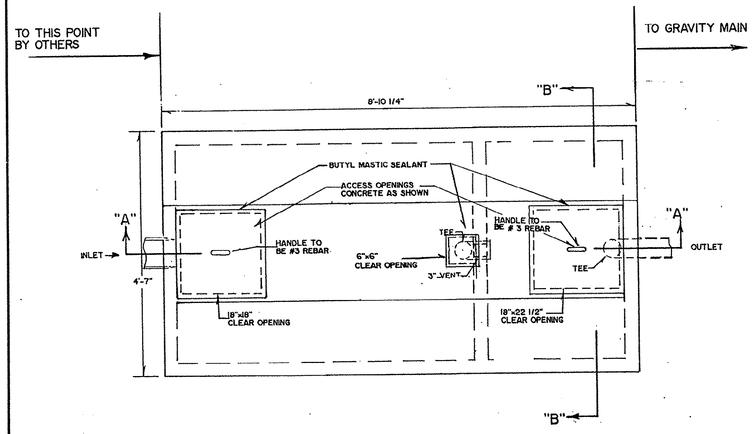
NOTED

PROJECT NUMBER: 198647

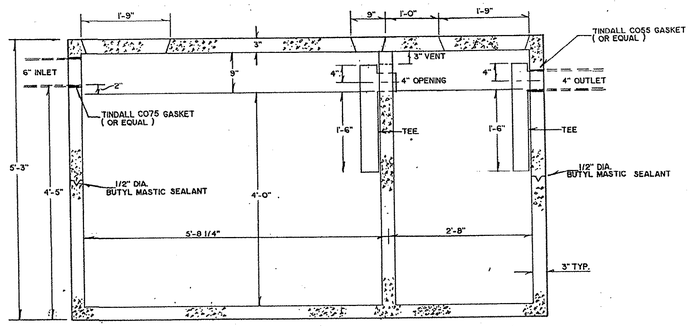
SHEET NUMBER: P.S. 2

REV.

25-07-057/51-s

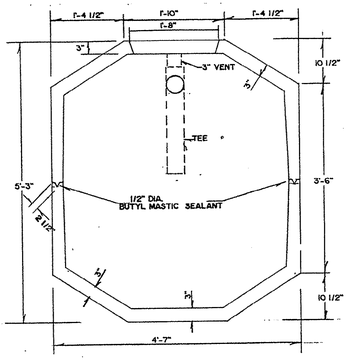


COLLECTION STATION
PLAN VIEW
NO SCALE

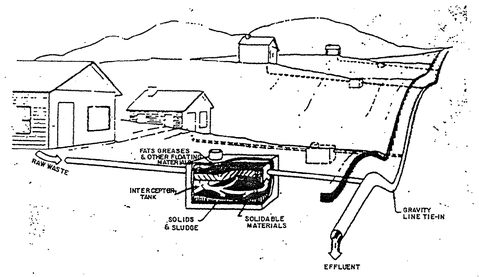


NOTE:
TOP AND BOTTOM ARE MONOLITHICALLY CAST AND HAVE MATCHING KEY JOINT.

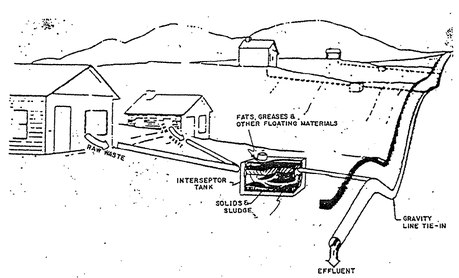
SECTION A-A
NO SCALE



SECTION B-B
NO SCALE



SCHEMATIC: SINGLE COLLECTION STATION n.t.s.



SCHEMATIC: DUAL COLLECTION STATION n.t.s.

NOTE :
SINGLE AND DUAL COLLECTION STATIONS ARE IDENTICAL. SEE SPECIFICATIONS FOR CONCRETE COLLECTION STATION.

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REV	DESCRIPTION	DR	APP'D	DATE
1	ADD COLLECTION STATION			12-11-87

SURVEYED AND MAPPED BY
SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR
DEXTER JONES 12-11-87
DRAWN DATE
CHECKED DATE
APPROVED DATE
OWNER'S APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

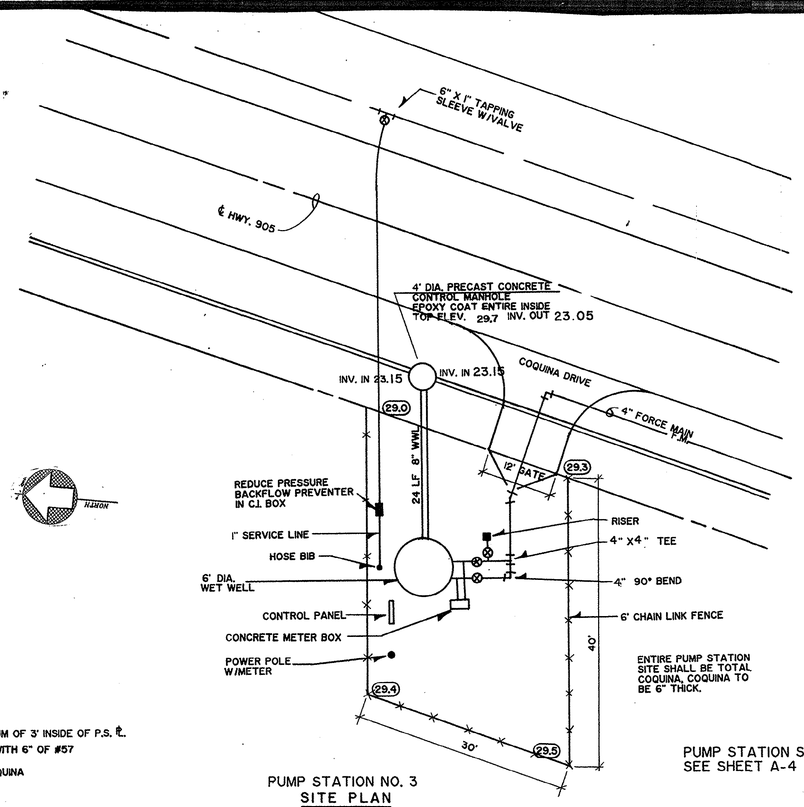
PROJECT
LONGS

TITLE
COLLECTION STATION

GRAND STRAND WATER & SEWER AUTHORITY

SCALE
NO SCALE
PROJECT NUMBER
SHEET NUMBER 3
REV.

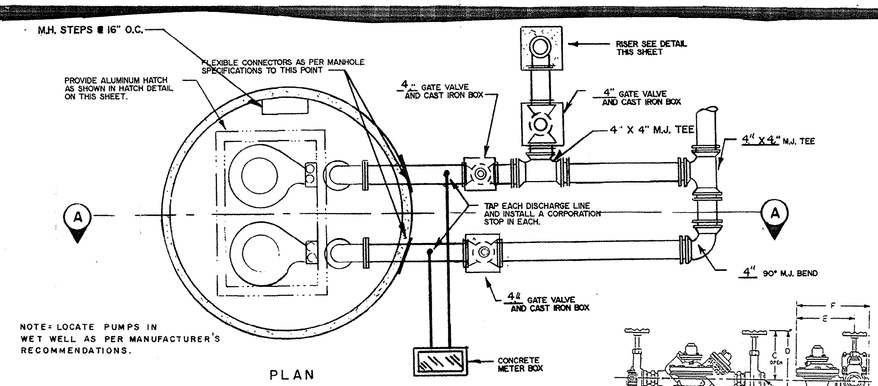
25-07-057/52-s



PUMP STATION SITE SEE SHEET A-4

PUMP STATION NO. 3
SITE PLAN
SCALE: 1" = 10'

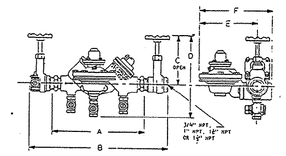
NOTES:
1 - FENCE TO BE PLACED A MINIMUM OF 3' INSIDE OF P.S. ℄.
2 - TOTAL SITE TO BE COVERED WITH 6" OF #57 STONE OVER FILTER FABRIC.
3 - ACCESS ROAD TO BE 6" COQUINA



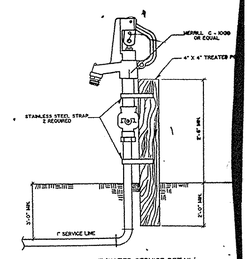
NOTE: LOCATE PUMPS IN WET WELL AS PER MANUFACTURER'S RECOMMENDATIONS.

PLAN
PUMPING STATION
NOT TO SCALE

PUMP DATA	
MODEL	FLYGT 3127 OR EQUAL
H. P.	6.4
VOLTS	460
R.P.M.	1750
IMPELLER	
PHASE OF POWER	3 ϕ
PUMP DISCHARGE SIZE	

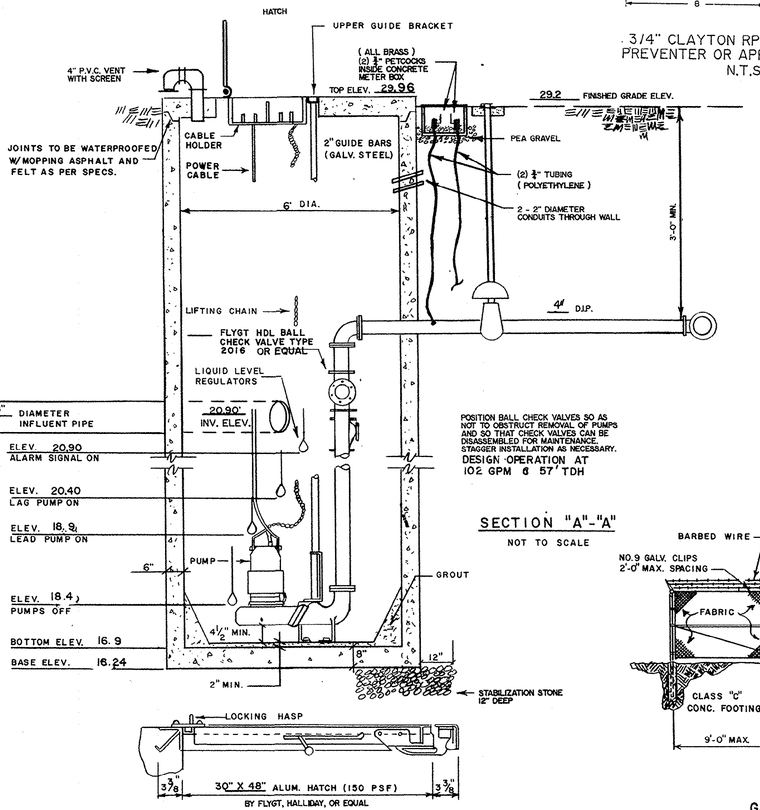


3/4" CLAYTON RP-2 BACKFLOW PREVENTER OR APPROVED EQUAL
N.T.S.



1" WATER SERVICE DETAIL
N.T.S.

THREADED CONNECTION AS REQUIRED BY GRAND STRAND WATER AND SEWER AUTHORITY



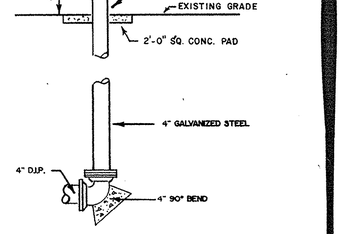
POSITION BALL CHECK VALVES SO AS NOT TO OBSTRUCT REMOVAL OF PUMPS AND SO THAT CHECK VALVES CAN BE DISASSEMBLED FOR MAINTENANCE. STAGGER INSTALLATION AS NECESSARY.
DESIGN OPERATION AT 102 GPM @ 57' TDH

SECTION "A"-"A"
NOT TO SCALE

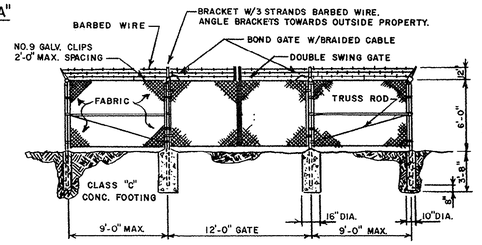
BY FLYGT, HALLIDAY, OR EQUAL

HATCH DETAIL
NOT TO SCALE

NOTE:
EMERGENCY PLATE TO BE PROVIDED AND INSTALLED BY G.S.W. & S.A.

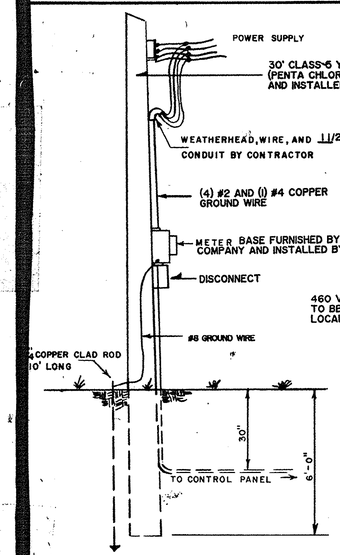


RISER DETAIL
NOT TO SCALE

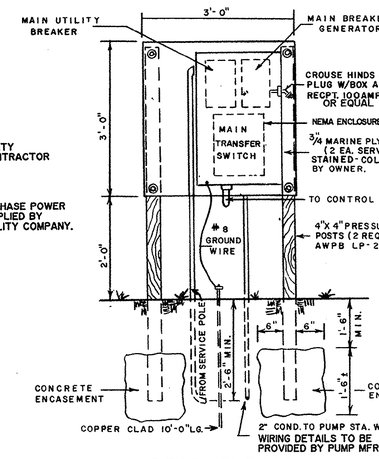


NOTE: ALL GATE POSTS, CORNER POST & LINE POSTS TO BE SET IN CONCRETE FOOTING AS SHOWN.

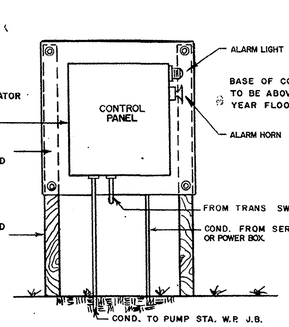
GALV. CHAIN LINK FENCE & GATE DETAIL



SERVICE POLE DETAIL
NOT TO SCALE



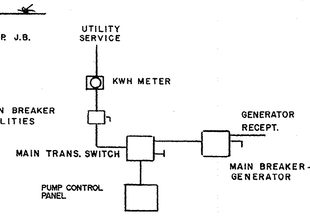
REAR ELEVATION



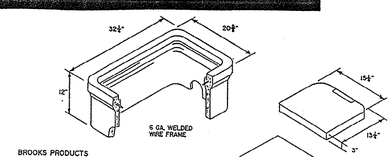
FRONT ELEVATION

NOTE:
(1) BOTH ENCLOSURES TO BE FURNISHED W/PADLOCKS.
(2) CAST IRON, WATERPROOF JUNCTION BOX TO BE INSTALLED IN W.W. NEAR THE TOP FOR TERMINATION OF ALL SUBMERSIBLE CABLES.

ELECTRICAL SERVICE DETAIL



WIRING SCHEMATIC



CONCRETE METER BOX AND COVER
N.T.S.

3	LOWER P.S. DOWN SIZE PIPING			12/13/88
	ADD METER BOX DETAIL, SHOW PETCOCK & TUBING TYPE	BH	AJ	12-11-87
1	REV PS SHT 5 INFO			11-17-87
NO.	DESCRIPTION	DR	APP'D	DATE

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SURVEYED AND MAPPED BY
SUR-TECH, INC
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR	FRED AKEL	
DRAWN	SUSAN YOUNT	DATE
CHECKED	FRED AKEL	DATE
APPROVED		DATE
OWNERS APPROVAL		DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR — DOUGLAS P. WENDEL
PROJECT MANAGER — FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT: LONGS

TITLE: PUMP STATION NO. 3

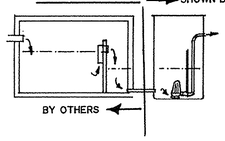
GRAND STRAND WATER & SEWER AUTHORITY

DATE: NOTED
PROJECT NUMBER: 198647
SHEET NUMBER: P.S. 3
REV:

25-07-057/53-s

NOTE: USE MATERIALS & EQUIPMENT SPECIFIED OR APPROVED EQUAL.

SCHEMATIC → SHOWN BELOW

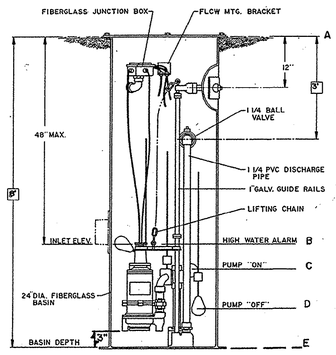


NOTE:

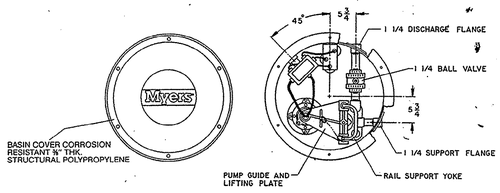
USE MYERS RESIDENTIAL RAIL SYSTEM PACKAGE (OR EQUAL)

PUMP DATA

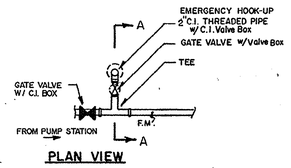
MODEL MYERS WHRH (OR EQUAL)
HP 1.0
VOLTS 230
RPM 3450
PHASE 1

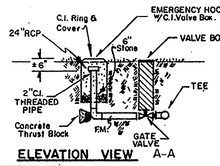


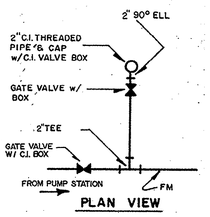
PUMP STATION ELEVATION VIEW
NOT TO SCALE



PUMP STATION PLAN VIEW
NOT TO SCALE



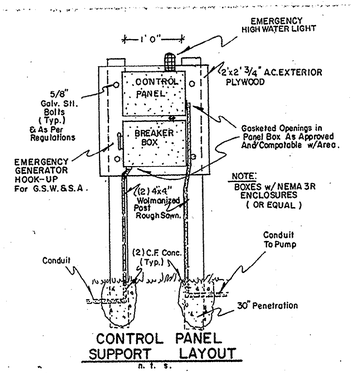




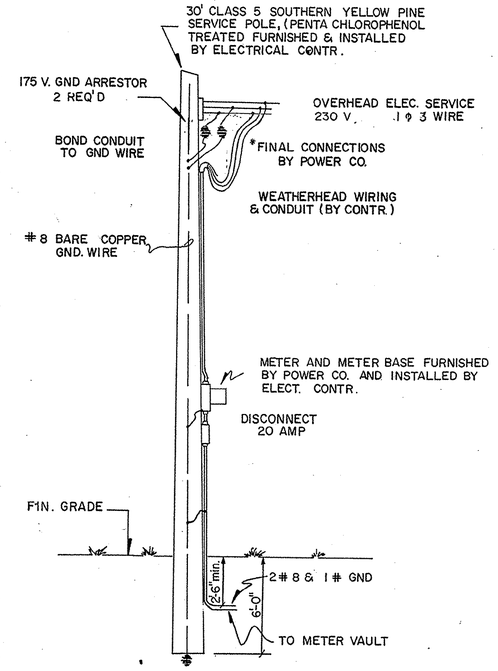
BY-PASS CONNECTION HOOK-UP DETAIL (Typ.)
N.T.S.

5 NOT REQUIRED

Elevation Point	SEE SHT. A-II FOR LOCATION 4
A.	35.7
B.	30.8
C.	29.5
D.	28.5
E.	27.7



CONTROL PANEL SUPPORT LAYOUT
n. t. s.



SERVICE POLE DETAIL
NOT TO SCALE

NOTE:
FOR USE WHERE UNDERGROUND SERVICE IS NOT AVAILABLE.

IN CASE OF EMERGENCY

CALL 650-8033
OR 448-1686
OR 347-4641

JOHN C. HAWKINS — REGISTERED PROFESSIONAL ENGINEER — SOUTH CAROLINA — No. 4541

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SCALE 1" = 50'

NO.	DESCRIPTION	BY	DATE
5	CHANGED NOTES P.S. NOT REQ'D.		12/13/88
4	REV. SHEET LOCATION	T.H.	12-11-87
3	CHANGE PUMP STATION		11-17-87
	ADD CHECK VALVE & NOTE; REV. VOLTS REV. BY-PASS HOOK-UP; SHOW SECTION		7/17/87
1	ADD RESIDENTIAL P.S. "C" - RENUMBER P.S.		5-8-87

SURVEYED AND MAPPED BY SUR-TECH, INC MURRELLS INLET SOUTH CAROLINA

ENGINEERING BY E.T.S., INC. MURRELLS INLET SOUTH CAROLINA

DESIGN SUPERVISOR
DRAWN DATE
CHECKED DATE
APPROVED AUG. 1986 DATE
OWNERS APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY CONTINENTAL AERIAL SURVEYS, INC BARTOW, FLORIDA

PROJECT: LONGS

TITLE: RESIDENTIAL PUMP STATION

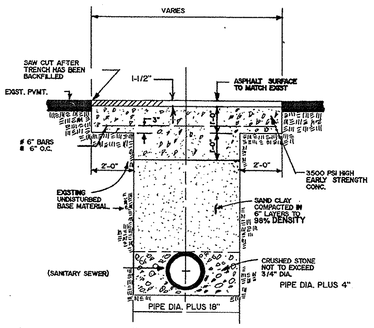
GRAND STRAND WATER & SEWER AUTHORITY

PROJECT NUMBER E-261-86

SHEET NUMBER P.S. 4

REV

25-07-057/54-S



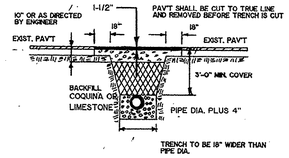
TYPICAL PAVEMENT REPAIR SECTION

NO SCALE

TYPE A

NOTE

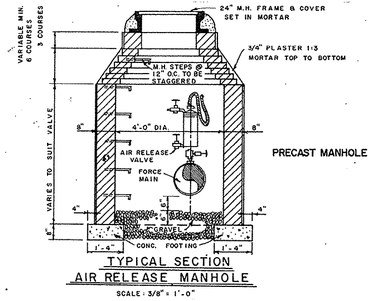
1) PAVT CUT TO EXTEND 18" BEYOND EDGES OF TRENCH AS SHOWN.
2) WHERE EXISTING PAVEMENT IS INSUFFICENT THICKNESS TO DEVELOPE TIGHT SEAL WITH NEW SURFACE, NEW PAVT WILL LAP EXIST. SURFACE TO FORM TIGHT SEAL.



TYPICAL TRENCH SECTION IN PAVED AREA

NO SCALE

TYPE B

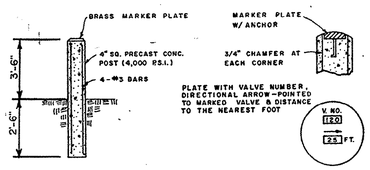


PRECAST MANHOLE

TYPICAL SECTION

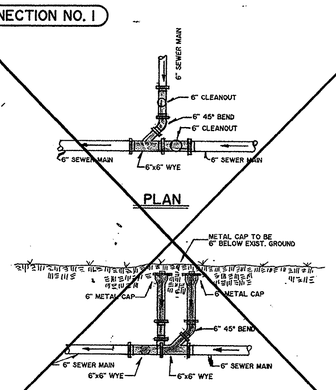
AIR RELEASE MANHOLE

SCALE : 3/8" = 1'-0"



TYPICAL CLEANOUT AND VALVE MARKER

CONNECTION NO. 1

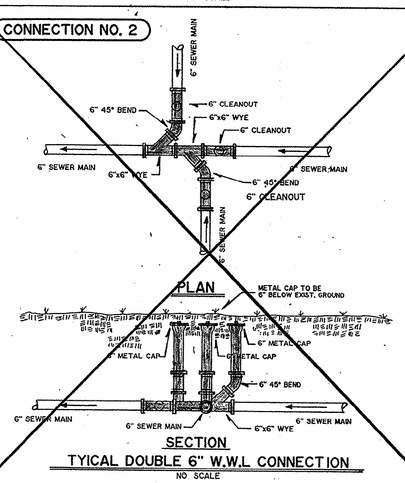


SECTION

TYPICAL 6" W.W.L. CONNECTION

NO SCALE

CONNECTION NO. 2

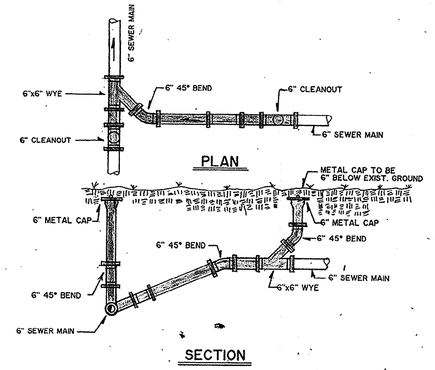


SECTION

TYICAL DOUBLE 6" W.W.L CONNECTION

NO SCALE

CONNECTION NO. 3

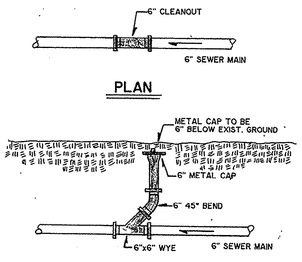


SECTION

TYPICAL DROP CONNECTION

NO SCALE

CONNECTION NO. 4

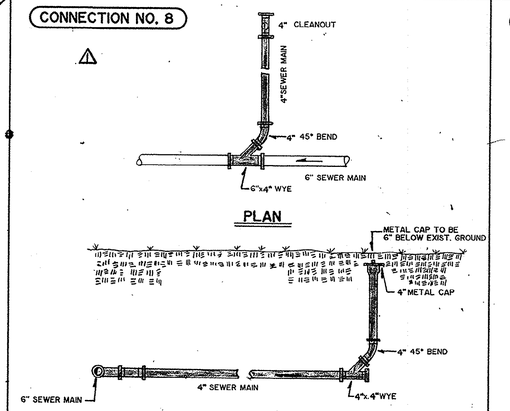


SECTION

TYPICAL CLEANOUT CONNECTION

NO SCALE

CONNECTION NO. 8

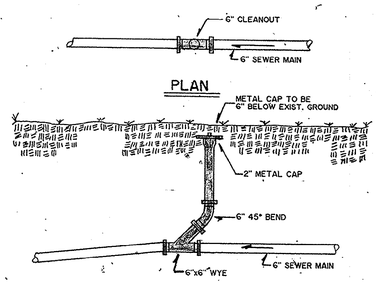


SECTION

TYPICAL SERVICE CONNECTION

NO SCALE

CONNECTION NO. 6

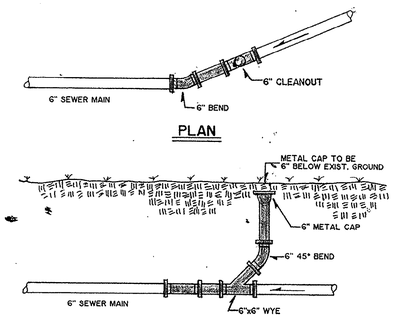


SECTION

CHANGE IN GRADE

NO SCALE

CONNECTION NO. 7

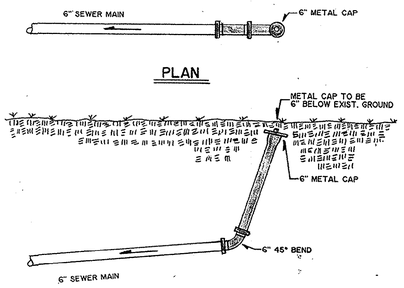


SECTION

CHANGE IN DIRECTION

NO SCALE

CONNECTION NO. 9

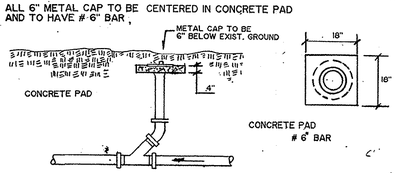


SECTION

TYPICAL END OF LINE CONNECTION

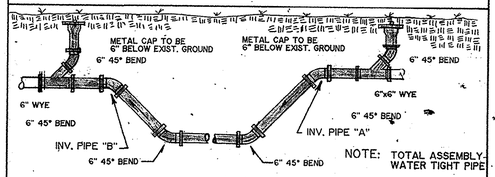
NO SCALE

NOTE: ALL 6" METAL CAP TO BE CENTERED IN CONCRETE PAD AND TO HAVE # 6" BAR



TYPICAL METAL CAP DETAIL

NO SCALE

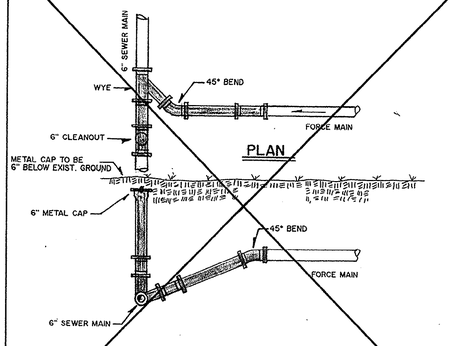


INV. PIPE "B" = INV. PIPE "A" MINUS MINIMUM OF 0.6'

INVERTED SIPHON

NO SCALE

CONNECTION NO. 5

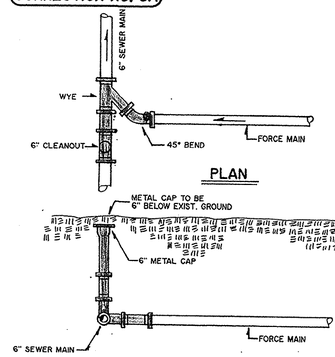


SECTION

TYPICAL FORCE MAIN DROP CONNECTION

NO SCALE

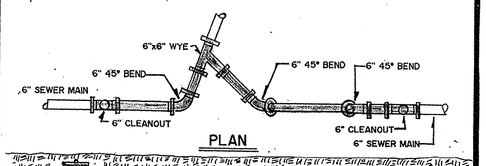
CONNECTION NO. 5A



SECTION

TYPICAL FORCE MAIN CONNECTION

NO SCALE



DETAIL A-A

NO SCALE

TO BE USED ON SHEET B-8.

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 4541 JOHN C. HAWKINS

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0 50
SCALE: 1" = 50'

REV	DESCRIPTION	DR	APP'D	DATE
	DELETE CONNECTION NO 1 & 2			12-11-87
1	Revised Detail #8; Labled Detail #5A	SRY		1/14/87

SURVEYED AND MAPPED BY: SUR-TECH, INC. MURRELLS INLET SOUTH CAROLINA

ENGINEERING BY: E.T.S., INC. MURRELLS INLET SOUTH CAROLINA

DESIGN SUPERVISOR

DRAWN DATE

CHECKED DATE

APPROVED AUG. 1986 DATE

OWNERS APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY

P. O. BOX 1537, CONWAY, SOUTH CAROLINA 29526

EXECUTIVE DIRECTOR DOUGLAS P. WENDEL

PROJECT MANAGER FRED R. RICHARDSON

PROJECT: LONGS

TITLE: CONNECTION DETAILS

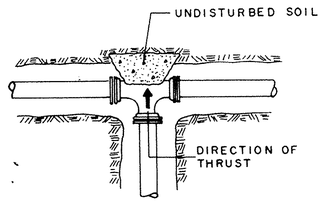
GRAND STRAND WATER & SEWER AUTHORITY

SCALE: HORIZONTAL NO SCALE, VERTICAL

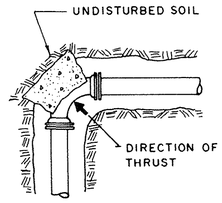
PROJECT NUMBER

SHEET NUMBER 4

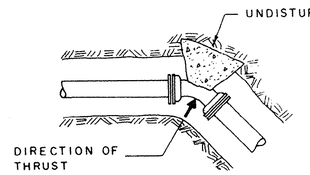
REV



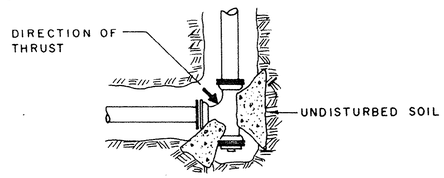
TEE



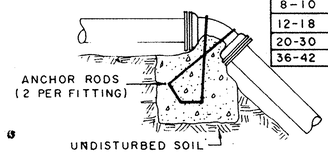
90° BEND



45° or 22½° BENDS

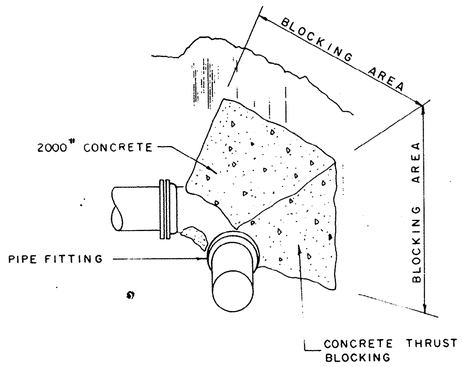


TEE & PLUG



ANCHOR ROD	
FITTING SIZE	ANCHOR SIZE
4 - 6	½"
8 - 10	¾"
12 - 18	⅞"
20 - 30	1⅛"
36 - 42	1⅜"

VERTICAL BEND & ANCHORS



CONCRETE THRUST BLOCKING SCHEDULE

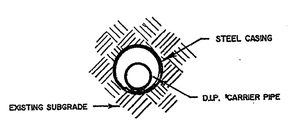
FITTING SIZE	BLOCKING AREA (SQ.FT.)				MIN. CU. YDS. CONCRETE				CONCRETE SCHEDULE VERTICAL BENDS		
	TEE	90°	45°	22½°	TEE	90°	45°	22½°	90°	45°	22½°
4"	0.6	0.9	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
6"	1.4	2.0	1.1	0.6	0.1	0.1	0.1	0.1	0.3	0.2	0.1
8"	2.5	3.6	1.9	1.0	0.1	0.1	0.1	0.1	0.6	0.4	0.2
10"	3.9	5.5	3.0	1.5	0.1	0.2	0.1	0.1	0.9	0.7	0.4
12"	5.7	8.0	4.4	2.2	0.2	0.3	0.2	0.1	1.3	0.9	0.5
16"	10.0	14.2	7.7	3.9	0.4	0.7	0.3	0.1	2.4	1.7	0.9
18"	12.7	18.0	9.8	5.0	0.6	0.9	0.4	0.1	3.0	2.1	1.1
20"	15.8	22.3	12.0	6.6	0.8	1.3	0.5	0.2	3.7	2.6	1.4
24"	22.7	32.1	17.3	8.9	1.3	2.2	0.9	0.3	5.3	3.8	2.0
30"	35.4	50.0	27.3	13.8	2.6	4.4	1.8	0.6	8.3	5.9	3.2
36"	51.1	72.3	38.9	19.8	4.5	7.6	3.0	1.1	12.0	8.5	4.6
42"	69.4	98.1	53.1	27.1	7.1	12.0	4.8	1.7	16.3	11.5	6.3

NOTE

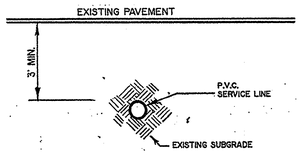
AREAS OF BLOCKING AND APPROXIMATE YARDS OF CONCRETE IN THE ABOVE TABLE IS BASED ON THE FOLLOWING DATA : 3000# SOIL PRESSURE – CLASS 150 PIPE AND TEST PRESSURE AT 150 P.S.I. (BEARING AREA SUBJECT TO CHANGE BASED ON VARIED SOIL CONDITIONS AND SHALL BE DONE SO AT THE DIRECTION OF THE ENGINEER).

GENERAL BLOCKING NOTES

1. CONCRETE FOR THRUST BLOCKING SHALL BE KEPT FAIRLY DRY THUS MAKING THE CONCRETE WEDGE SHAPE MORE EASILY FORMED WITH THE WIDEST PART (BLOCKING AREA) AGAINST UNDISTURBED SOIL.
2. CONCRETE SHALL BE KEPT BEHIND THE BELL OF THE FITTING, IF NECESSARY ON LARGE FITTINGS SOME FORMING AT SIDES AND TOP TO ACHIEVE PROPER BEARING AREA WITH THE MINIMUM OF CONCRETE AND ELIMINATE CONCRETE RUNNING AGAINST PIPE OR IN THE JOINT.
3. ALL FITTINGS AND ACCESSORIES TO BE WRAPPED WITH 10 MIL. POLYETHYLENE PRIOR TO POURING BLOCKING CONCRETE.
4. "SAKRETE" MAY BE USED IN LIEU OF READY-MIX CONCRETE FOR BLOCKING OF FITTINGS FOR PIPE SIZES 18" AND SMALLER IF THE REQUIRED "MINIMUM CUBIC YARDS OF CONCRETE" FOR BLOCKING (AS SHOWN IN TABLE AT LEFT) ARE PROVIDED FOR EACH FITTING.



MAIN LINE
BORE AND JACK DETAIL



SERVICE LINE
BORE AND JACK DETAIL



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REV	DESCRIPTION	DR.	APP'D	DATE
1	ADD BORE AND JACK DETAILS	BH	MM	5-19-87

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SUR-TECH, INC.
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

APPROVED
AUG. 1986

GRAND STRAND WATER AND SEWER AUTHORITY
P. O. BOX 1537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P. WENDEL
PROJECT MANAGER FRED R. RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC.
BARTOW, FLORIDA

PROJECT
LONGS

TITLE
BLOCKING DETAILS
BORE AND JACK DETAILS

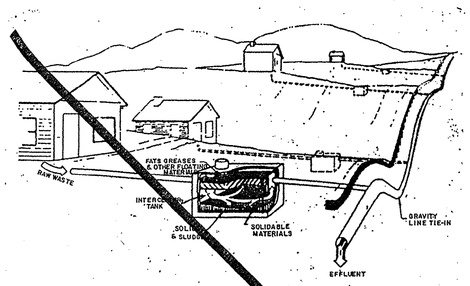
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NO SCALE

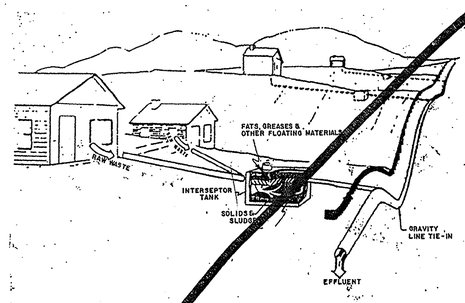
PROJECT NUMBER

SHEET NUMBER 5 REV

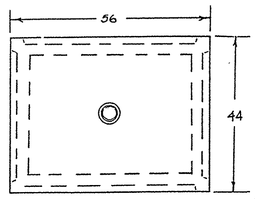
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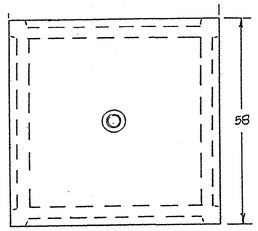
SCHEMATIC: SINGLE COLLECTION STATION n.t.s.



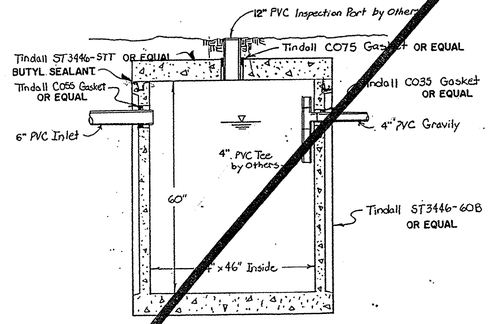
SCHEMATIC: DUAL COLLECTION STATION n.t.s.



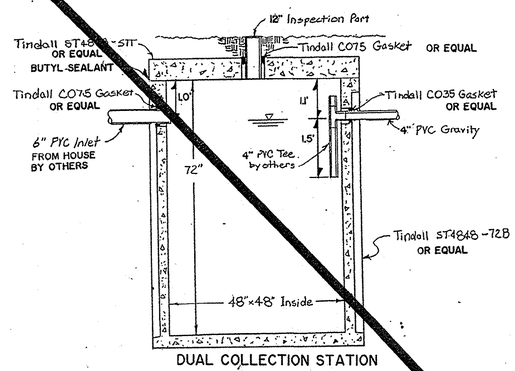
PLAN



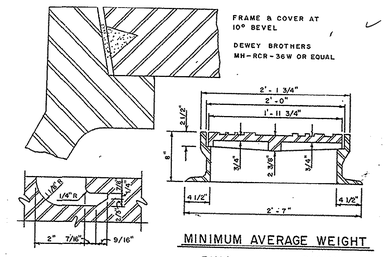
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SINGLE COLLECTION STATION



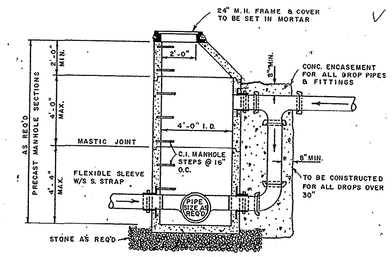
DUAL COLLECTION STATION



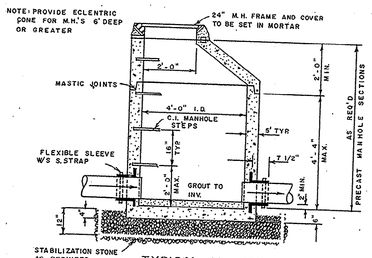
DETAIL OF PICK HOLE

MINIMUM AVERAGE WEIGHT
RING ——— 210 lbs.
COVER ——— 145 lbs.

WATERPROOF MANHOLE FRAME AND COVER
NO SCALE



TYPICAL SECTION
TYPE "A" DROP SANITARY SEWER MANHOLE
SCALE: 3/16" = 1'-0"



TYPICAL SECTION
PRECAST SANITARY SEWER MANHOLE
NO SCALE

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REV.	DESCRIPTION	BY	APP'D	DATE
1	ADD MH Details			11-17-87
1	ELIMINATE Collection Station			11-17-87

SURVEYED AND MAPPED BY
SUR-TECH, INC
MURRELLS INLET
SOUTH CAROLINA

ENGINEERING BY
E.T.S., INC.
MURRELLS INLET
SOUTH CAROLINA

DESIGN SUPERVISOR: FRED AKEL
DRAWN: SUSAN YOUNT DATE
CHECKED: FRED AKEL DATE
APPROVED DATE
OWNERS APPROVAL DATE

GRAND STRAND WATER AND SEWER AUTHORITY
P.O. BOX 537, CONWAY, SOUTH CAROLINA 29526
EXECUTIVE DIRECTOR DOUGLAS P WENDEL
PROJECT MANAGER FRED'R RICHARDSON

PREPARED BY
CONTINENTAL AERIAL SURVEYS, INC
BARTOW, FLORIDA

PROJECT: LONGS

TITLE: MANHOLE DETAILS

GRAND STRAND WATER & SEWER AUTHORITY

NOTED

PROJECT NUMBER: 198647

SHEET NUMBER: 6

REV

25-07-057/57-S